FEEDSTUFFS®

The Weekly Newspaper for the Feed Industry

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FEEDSTUFFS *Features This Week*

DETAILS ON OPERATIONS—This article gives details on operations of a feed firm which has increased its business 20 fold in 10 years. **Page 18.**

STABILIZING BROILERS—Stabilizing the broiler industry is the subject of an article appearing on **page 26.**

NEW MILL—An Alabama firm forced out of its location by highway construction found a new location the owners consider ideal. **Page 34.**

SAFFLOWER MEAL—Research on safflower meal as a high protein supplement for chickens is told on **page 70.**

—REGULAR FEATURES—

Up or Down	48	Convention Calendar	64
Putting Research to Work	49	Feedstuffs Monthly Index	74
Joe Brooks	54	Worth Looking Into	78

Some Objections to U.S. Turkey Proposals Heard

By JOHN CIPPERLY
Feedstuffs Washington Correspondent

WASHINGTON—Reportorial seismographs here indicate some ground rumbles against imposition of the U.S. Department of Agriculture plans for marketing agreements and orders for the turkey industry.

These preliminary danger signals for USDA "eager beaver" promoters of this type of program for agriculture come from several quarters—from some in the turkey industry itself; from some feed manufacturers and, not too surprisingly, from government officials who have had experience in the operation of such techniques.

It has been felt by many that marketing agreements and orders for turkey hatching eggs and market turkeys would be voted upon favorably and would be instituted without much real opposition. But some opposition is apparent below the surface as well as, in at least some instances, in the open. And some of those who question the wisdom of instituting marketing orders on a national basis for turkeys as well as other products of animal agriculture raise a number of points for further consideration by the industry.

National Basis Questioned

It has been learned from former officials of USDA that when national marketing agreements and orders

(Turn to **OBJECTIONS**, page 4)

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Specialization Noted in 2-Phase Swine Production

ST. LOUIS—A prediction of a growing trend toward specialization in the hog business—with the kind of two phase production system seen in the cattle business—was made at the feeder pig production workshop of the National Swine Conference here.

James D. McKean, Jr., of the Illinois Feeder Pig Marketing Assn., Decatur, spoke of the trend in which

(Turn to **SPECIALIZATION**, page 93)

Illinois Officers Reelected; Marketing Orders Opposed

By DON E. ROGERS
Feedstuffs Staff

SPRINGFIELD—The Illinois Feed Assn. and the Illinois Poultry and Hatchery Federation elected officers at a joint convention Nov. 8-9 in Springfield. The feed group also went on record opposing marketing orders on poultry and livestock.

The feed association reelected its officers, but enlarged its board of directors from nine to 18 members in a move which added three areas to the state.

Reelected were: Roy F. Hewitt, Hillsboro, president; Henry Marlowe, Huntley, vice president; A. T. (Ted)

(Turn to **ILLINOIS**, page 8)

USDA to Review Storage Situation

WASHINGTON—Starting Nov. 27, the U.S. Department of Agriculture will review the grain storage situation to up-date the storage cost survey it made in 1959.

USDA officials announced this week that the review will be completed by late December and the department intends for it "to lead toward improvement and more efficient operation" of the program under which grains are stored for Commo-

(Turn to **STORAGE**, page 97)

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Undertones Seen In Storage Study

By JOHN CIPPERLY
Feedstuffs Washington Correspondent

WASHINGTON — Renewed activities in the cost study of storage of government grain stocks carries some serious undertones for terminal elevators, it is seen here.

This conclusion is reached when it is known that the present associate director of Commodity Stabilization Service is Edwin Jaenke, who previously served on the staff of Sen. Stuart Symington (D., Mo.) when he conducted the investigation of Commodity Credit Corp. which centered around the costs of government grain storage.

(Turn to **UNDERTONES**, page 8)

Feed Man Poses Questions on Turkey Orders

COLLEGE STATION, TEXAS—Fourteen questions which a feed industry spokesman feels should be considered in evaluating proposed marketing agreements and orders for the turkey industry, were outlined at a turkey industry meeting here this week.

William B. Palm, turkey program manager of Nutrena Feeds, Minneapolis, said more information is needed before an intelligent pro or con decision on marketing agreements and orders can be made.

Proposals include regulations at the hatchery level and at the processing level, Mr. Palm noted.

"The decision, whatever it may be, will likely change the course of American animal agriculture for years to come," he said. "Before we make up our minds we should ask a lot of questions and get some good answers."

Questions posed by Mr. Palm to the Texas Turkey Industry Day meeting at Texas A&M College were:

—How will a grower be assured a fair share of good poults?

(Turn to **QUESTIONS**, page 8)

• • •

Plan Supersweet Plant in Illinois

MINNEAPOLIS — A new Supersweet Feeds plant will be constructed at Danville, Ill., to serve feed dealers in eastern Illinois and central Indiana, it was announced this week. Supersweet Feeds, a division of International Milling Co., Minneapolis, will start construction next spring, with completion planned for late summer.

The new mill will be on nine acres

(Turn to **SUPERSWEET**, page 8)

Iowa Turkey Group Endorses Proposal

DES MOINES—The Iowa Turkey Federation, representing a state which has ranked third in turkey production, this week endorsed the marketing orders and agreements proposed for turkeys.

With only one dissenting vote, the federation passed this resolution:

"We wish to go on record as favoring the national marketing order for turkeys and that our recommenda-

(Turn to **IOWA**, page 93)

It's Time of Year to Try to Figure Out What's Ahead in 1962

'Tisn't quite the season to be jolly, but 'tis the time of year when just about everybody—the feed man, the producer, and the government analyst—starts thinking about what's happened this year and what's ahead in 1962.

If you haven't already made up your mind on what to expect in 1962 in the way of production, use and pricing of livestock, poultry, eggs, feed ingredients and other items, perhaps you'll find some useful clues in the outlook observations briefed in adjoining stories.

• • •

Feed Supply Down From 1960-61, But 18% Above Average

WASHINGTON — The 252 million tons of feed grains and other concentrates estimated by the U.S. Department of Agriculture for 1961-62 is 3% less than the 1960-61 supply, but still it's large, exceeding the supply of any year prior to 1960 and 18% above 1955-59 average.

The analytical tone of USDA's 1962 outlook issue of "The Feed Situation" indicates that government agricultural policy administrators are disappointed that the estimated supply

(Turn to **FEED**, page 96)

Egg, Broiler, Turkey Situations Pondered

WASHINGTON—The U.S. Department of Agriculture, according to its 1962 outlook issue of "The Poultry and Egg Situation," seems pretty sure of what'll happen next year to egg production and prices. But for broilers and turkeys the water is a little muddy. Egg production, USDA says, more or less responds to "equilibrium analysis"—a high price induces increased output in the next production cycle, and vice versa. But for broilers and turkeys, judgment of prospective supplies for the coming year is based on a different kind of economic reasoning; USDA calls it "game theory." Individual firms guide themselves by strategies that attempt to anticipate what the rest of their industry might

(Turn to **SITUATIONS**, page 93)

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Price and Supply Trends of Protein Feeds Forecast

WASHINGTON — Here's the way government agricultural economists, recording their 1962 outlook analyses in reports issued this week, say supply, demand and prices of oilseed meals, animal proteins, grain high-protein feeds and other ingredients will go in the 1961-62 feeding year:

Soybean meal — Despite increased consumption by livestock and poultry, ample supplies of this high-protein feed are expected to hold the

(Turn to **PROTEINS**, page 96)

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The regional circulation of this issue is concentrated in the southeastern states

Top of the Hopper

QUITE A FEW PERSONS and firms in the poultry and feed industries continue to favor establishment of marketing orders and agreements for the turkey industry and possibly the broiler industry. A good many arguments for the so-called "self-help" programs have been cited. One of them is that without such programs, the turkey industry will continue to move into fewer and fewer hands. Some proponents say that, aside from other over-all economic questions, they want to see more producers stay in the business, and they contend that in the absence of marketing orders, the "independent" growers will be eliminated entirely at the expense of large, completely integrated operations.

Some persons may be giving silent assent to current and prospective proposals for the poultry industries; others may be taking a "wait and see" attitude. However, it does appear that there is more opposition to marketing orders than meets the eye, and possibly some of this will become more vocal. Some feel that opposition to control programs is increasing in the Midwest as well as some other areas.

Some of this apparently stems from the feeling that any control program will tend to freeze existing patterns of production and efficiency and technology, with the effects being felt on regional as well as individual company bases. As one observer said, "It will become a lot more important to have a quota or a specific outlet than it will to develop and use better methods of production and marketing."

THE RECENT REPORT indicating that selenium is a carcinogen offers some interesting possibilities for challenging the Delaney concept of the Food Additives Legislation, according to a knowledgeable scientist. Selenium, he points out, also has been shown to be an essential nutrient. How can the Delaney clause, with its inflexible ban on suspected carcinogens be squared with a proven need for a particular nutrient which is also considered a carcinogen?

FOR SOME TIME, some California feed manufacturers have been selling feed to poultry buying groups at a low margin over ingredient cost, with the feed firms obtaining the business on the basis of bids on the manufacture and delivery of feed made according to the groups' formulas. It now appears that moves will be made among some feed firms to get similar programs started in other areas, too.

INTEGRATED POULTRY or other special projects aren't the only way to build feed tonnage these days. Some feed manufacturing firms have reported both publicly and privately on increased business. A midwestern manufacturer commented the other day: "In spite of no participation in integrated operations, our business is going along very well, and we have just had the biggest October in our history, at least tonnage-wise."

OVERFLOWING COLD STORAGE space is a distressing consideration for the turkey industry. A sales representative for a midwestern feed manufacturing concern observed that this acute storage problem had created isolated predicaments in which live turkeys were bought at a higher price per pound than birds already processed.

THE APPARENT BACKFIRING of the feed grain program, which didn't reduce production very much and is costing a whole lot more than Secretary Freeman predicted it would, is reported to be making President Kennedy

(Turn to TOP OF THE HOPPER, page 93)

How's Business?

AN EVERY WEEK REVIEW OF FORMULA FEED BUSINESS VOLUME, INCLUDING PRICE, SUPPLY AND DEMAND TRENDS

Feed volume remained about steady with that of a week earlier. Few regions in the country reported much change in demand.

Broiler feed manufacturers continue to operate on a curtailed basis in most areas. However, the Delmarva area has reported increases in placements this week.

Cattle feed demand is good, and hog feeds are continuing to move well in their areas despite the less favorable hog-corn ratio of recent weeks. Poultry feeds also account for a sizeable portion of the volume.

Most feed manufacturers expect prices will remain unchanged or move just slightly higher on their new price lists.

The wholesale feedstuff price index edged up to 81.1 from 80.9 a week ago, and this compared with 71.8 a year earlier. The feed-grain index moved up to 64.3. It had been 63.4 last week and was 59.0 a year ago.

On a Chicago price basis, the hog-corn ratio was 14.9 this week; this compared with 14.6 the week before and 17.3 a year earlier. (Major market roundup and ingredient quotations appear on pages 94-96.)

Northwest

A definite trend in the feed business volume in this area seemed to be lacking this week. A survey of manufacturers resulted in a stand-off—about the same number of firms reported business as improved from a week ago as said it was off somewhat.

One manufacturer said that there had been a sizeable increase in volume this week. Another industry spokesman, who admitted his firm's volume was off from a week ago, said he couldn't complain because volume was still over the year-ago level.

Hog, cattle and poultry feeds are all reported to be moving well.

Price lists are expected to be unchanged to $1 higher.

Southwest

Formula feed business in the Southwest continues at a very satisfactory pace with most mills operating on a heavy five-day to six-day schedule. Some sources indicated some concern that the higher feed prices caused by sharply higher prices of proteins, millfeeds and some feed grains might tend to cause some contraction in formula feed sales, but there was little evidence to support this.

Cattle feed shipments continue to provide the bulk of the business volume; however, some manufacturers indicated that they had shipped much of the cattle feed on their books and were waiting for another round of bookings.

With present feeding ratios still very good, the shipments of hog and dairy feeds were sizeable. Some trade sources indicated that the higher feed prices and lower hog prices might affect hog feed volume in the next week or so.

Some mill operators still report fairly heavy shipments of turkey feeds; but, the total is not too significant.

Northeast

Demand for formula feeds in the western New York area held to the slightly lower level of the past two weeks.

The tonnage was made up mostly of dairy feeds and egg mashes, with pullet feeds showing up for birds which are late getting into production. Turkey feeds are fading but broiler feeds should pick up soon.

Consumers continued to prefer lower protein feeds, with demand centered on 16% to 20% proteins in complete feeds and 28% to 32% in the mixed feeds.

In the New England states demand for feeds continued at the stepped-up pace of the previous week, with dairy feeds accounting for the bulk of the tonnage. Here, too, consumers sought the lower protein feeds. Egg mash turnover continued to suffer somewhat from smaller laying flocks.

Egg prices were steady to higher in New York. A scarcity of medium-sized eggs in the New England states sent prices up as much as 5¢ doz., but jumbo-sized eggs held steady. Broiler prices in the latter area slipped to 12¢ to 12½¢ lb. from 13¢ to 14¢ in the preceding week.

Running time of formula feed manufacturers ranged from an average of 36 hours in the western New York area to 40 hours in the New England states.

Southeast

Formula feed business in the Southeast continues to improve each week; however, broiler feed manufacturers are only operating at 65% to 70% of normal capacity due to the cutback in chick placements.

Broiler prices declined 1¢ lb. again this week, with sales being made from 10¢ to 11¢ lb., f.o.b. the farms. It looks like there will be no improvement in prices until after the first of the year. It is rumored that many feed manufacturers have discontinued placing chicks with growers and are feeding only those which they already have on contract.

As drouth conditions continue throughout large areas of the southeastern states, pastures suffer severe damage, creating a strong demand for feed for immediate shipment. The approach of cold weather is expected to further stimulate sales for November-December shipment.

Central States

The first week in November, when measured by what was taking place in October, seemed to be just a little lighter insofar as demand for mixed feeds was concerned. But this does not mean that it was quiet. Mill spokesmen generally seemed to be optimistic about the possibilities for the current month, now that the buying trade has become more reconciled to the higher range of prices that were put into effect earlier this fall.

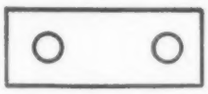
Although hog prices are well down from their tops of earlier in the year, with just about a straight week of daily declines of 10 to 15¢ and in some cases a little more, hog feeds continue to move on a fairly even keel. The same goes for egg mash and poultry feeds other than broiler.

Delmarva

Falling prices for broilers did not dampen spirits of broiler contractors. Maryland chick placements were up 14% above a year earlier. Delaware's placements were up 3%.

Last week's price was 12.38¢. The

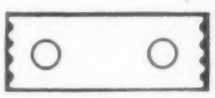
(Turn to MARKETS, page 99)



Strap Hammer. Heat treated, not hardfaced.

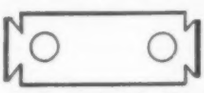
Strap Hammer with hardfaced ends.

Strap Hammer with hardfaced ends and edges.



Serrated Edge Hardface Hammer with hardfaced ends

Serrated Hammer with hardfaced ends and edges. 50% more Tungsten-carbide.

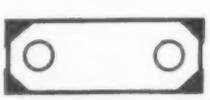


Single Notched Double End Hammer hardened, not hardfaced.

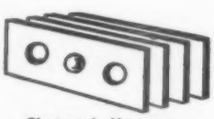
Single Notched Double End Hammer with hardfacing.

Notched Hammer hardened, not hardfaced.

Notched Hammer with hardfaced ends.



Capped Hammer has corners hardfaced.



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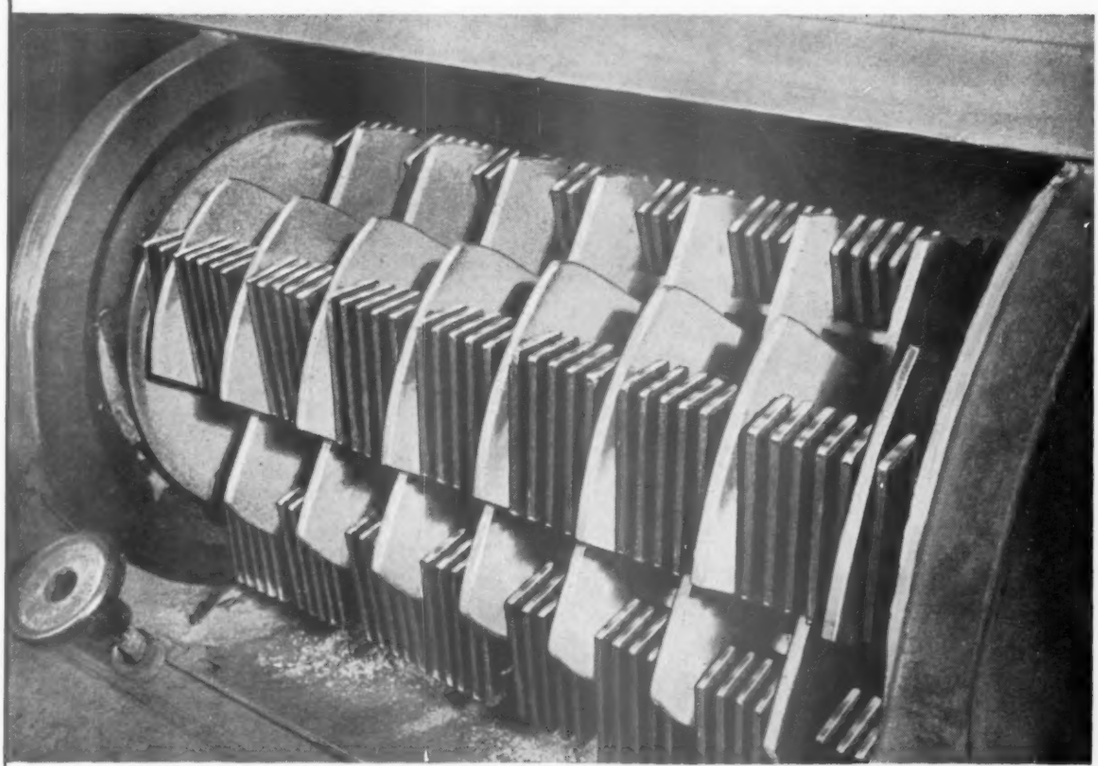

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OBJECTIONS

(Continued from page 1)

were discussed under the Benson administration, responsible and informed government officials raised so many important objections to the use of this technique on a national scale that any hope of gaining approval of the national marketing order technique was dropped.

At that time government advisors told the then national agricultural advisory committee that marketing orders and agreements had virtue when imposed in small areas or state units where there was a cohesive interest and incentive for such techniques. On a national scale, however, the complexities of administration posed a problem of major magnitude which would impose delays and problems among marketing areas, particularly where amendments to a national order would be time consuming and unconscionably slow in preparation and approval by the managing committee.

Would Impose Freeze

However, the most audible of some now rising voices of opposition cite the perceived danger that marketing agreements and orders would impose a virtual freeze on the existing structure of the turkey industry since they propose allocation bases and allotments on a nearby base period. This condition is seen as favorable to many operators who in the recent past have built up a heavy record of volume during the years when the former secretary of agriculture, Ezra Taft Benson, was advising the industry to slow down output. Even in those years political pressure became so great that USDA was forced into surplus procurement of turkeys. It is asserted that now the same producers or turkey operators who were unwilling to restrain production levels may become the beneficiaries of marketing agreement and order allocations.

While the proposed marketing agreements and orders for market turkeys would be applied at the "handler" or processor level, the effect would be to freeze production patterns on both a regional or area basis and an industry structure basis.

This would, among other things, tend to protect any higher cost areas or operations at the expense of newer, possibly more efficient areas, although basic differences in costs among existing areas or operations would not be eliminated. Also, the incentive for new technology or new methods would be dampened, partly because new methods often require larger operations, which now could not so readily grow. In effect, quotas or affiliations with those with quotas could become more important than possible new efficiencies or programs.

In the case of hatching eggs, the proposed order indicates use of one or more stated methods of regulation. One of the methods would involve allocation bases for producers of hatching eggs.

Allotment Problems

If USDA can put proposed procedures through a sympathetic advisory board and management committee after a favorable referendum, it will have imposed on the turkey industry some of the same problems which exist in other farm crops which come under acreage allotments, some observers say. In crop allotments, the allotment becomes virtually a covenant, giving the acreage allotment land a higher built-in asset value than is available to equally good and adjacent land for the same crop. It is remarked that the turkey hatching egg and market turkey orders could have the same sort of effect on the turkey industry.

While the proposed agreements and orders are designed to put the industry on the high road to higher and more favorable prices for the commodity, some proponents, it is said, are not taking time to explain that in the wake of the program could come a flood of inequities. Although it has been said that price would do the rationing, some mention the possible ingredient of favoritism between hatcherymen and customers. Some say the program could raise the spectre of expansion of inferior qualities for distribution to the raiser of turkeys, and they say it could put into the hands of the egg producer and operator a force which could impose economic penalties on the growers of birds.

For the feed industry, it is said, the program could touch off a trend of various competitive complexes which would be harmful to an orderly development of the turkey industry.

Consumer Angle

While there has been little expression from the general public on the proposals, there are some thoughtful observers who doubt the desirability of the orders, not only for the above and other reasons, but from the standpoint of consumers, who ultimately are affected by and pay for any program of any type.

Marketing agreements and orders, of course, have as their prime purpose the raising of prices which ultimately must be passed on to the consumer. USDA advocates of the proposals are inclined to slough off the possibility that the consumer might object to raising prices by as much as 10¢ per pound.

Others say that perhaps the housewife will accept such an advance in price during the traditional holiday period of peak sales. But, they ask, how about buying in other seasons, when the turkey industry and retailers have been working to obtain an exhaust valve to put turkeys into the home refrigerator throughout the year? Raising price is always an attraction to the producer, but Mrs. Housewife may see it through different and not necessarily rose colored glasses.

However, some say that this road to prosperity may not even be available to the producer. They observe that if hatching eggs and poults were to rise substantially or become subject to unfair distribution to producers, the turkey grower could find the proposal a "dismal swamp out of which he might find a long uncertain trail back to economic freedom."

Product Shifts

And in the face of rising turkey prices, Mrs. Consumer always has the choice of shifting to some substitute products, such as hams or other meat products or dairy dishes. Pocketbooks are something akin to human stomachs; they are not bottomless pits.

Such a change might undo much of the favorable aspect of the situation which the turkey industry has developed for itself. Substantially higher prices may dull the taste for turkey meat as a year-round item and ultimately reverse the increase in turkey consumption in favor of substitute products, thereby erasing the merchandising advances of the industry—a condition which would be a long time in correcting.

Small Producers

Another basic consideration which is not always mentioned is the ease of access into some industries. In the turkey industry, the small farmer or farmer's wife could be a cloud on the horizon.

Under the statute which authorizes marketing agreements and orders, producers of record are permitted to participate in a referendum. The question arises as to how large a turnout may be expected and what will be the attitude of smaller producers still in the business.

In addition to that, if the marketing order proposals get the two thirds majority, there seems to be no means of invading the domain of the small producer and Mrs. Farm Wife. Some observers note that there would be no means of prohibiting the farm wife from feeding some breeding hens, producing some hatching eggs and selling them to others, if perchance the hatching egg price went to a high figure. Or, she could hatch some poults and grow out some turkeys.

There is no method of obtaining price control authority under marketing agreements and orders, and there seems to be no practical method of controlling farm production of birds in small flocks, or farm slaughter. And some persons feel that, if there were some strong price attractions, some small uncontrolled operations collectively could add up to a significant factor. As one person put it, people in some areas already are not adverse to "moonshining."

Other Controls

In connection with the factors of reduced supply and higher prices mentioned above, some also emphasize the possibility of direction of resources for production of a controlled commodity into other operations where surplus production might be stimulated and bring a chain effect of controls upon controls in one commodity after another.

At any rate, there are at least some rumbles of opposition to proposed turkey controls as well as to other possible programs which would require new legislation.

These things have been pointed out while at the same time noting the tremenodus losses which some growers—averaging perhaps $1 per bird in some places—and others in the industry have suffered this year. And it is understandable that many are seeking a means of preserving the present general structure of the industry, including the independent growers, and helping to assure a return on investment and labor, as compared with the situation under over-expansion.

However, some qualified observers, including some in the industry, are beginning to raise more objections to the proposed turkey program and other possible programs, feeling that the possible results over the long term, from both a public and industry standpoint, may be the greater evil and less than desirable.

Meanwhile, in connection with present or prospective programs in the poultry industry, there are some bold rumors that USDA may not be above packing of industry advisory or administrative committees with persons favorably disposed to government programs. No specific instances of this have been mentioned in connection with some advisory groups that may be formed, but there are some rather meaningful smiles when the subject is mentioned here.

Minnesota Schedules Area Turkey Meetings

ST. PAUL—Three area meetings in Minnesota have been arranged to disseminate information concerning proposed turkey and turkey hatching egg marketing orders to representatives of the industry in the state.

The meeting will be held next week under the auspices of the Minnesota Turkey Growers Assn. and the Agricultural Extension Service of the University of Minnesota, announced Roy Munson, association secretary.

The first information meeting will be at Faribault Nov. 15. A second will follow Nov. 16 at Olivia. And a third is scheduled for Nov. 17 at Thief River Falls.

Mr. Munson said anyone interested will have an opportunity to direct questions to a representative of the U.S. Department of Agriculture and a University of Minnesota agricultural economist.

Broilers Mostly 11c

Following a 1¢ decline earlier in the week, southeastern broiler prices regained that loss Nov. 9 when the market rebounded a penny to mostly 11¢. This new level was also about 1¢ higher than a week earlier.

FTC's Antibiotic Charges Dismissed

NEW YORK—Chas. Pfizer & Co., Inc., announces that it has been notified by the Federal Trade Commission of a decision and order dismissing the complaint and all charges filed against Pfizer and four other pharmaceutical houses Aug. 1, 1958.

The complaint charged Chas. Pfizer & Co., Inc., American Cyanamid Co., Bristol-Myers, E. R. Squibb and Upjohn Co. with price fixing and monopolization in the manufacture and sale of broad-spectrum antibiotics. One of the major issues of the complaint involved the validity of Pfizer's patent on tetracycline.

In a statement Nov. 10 concerning the FTC decision and order, John E. McKeen, Pfizer president, said, "We are gratified that the examiner for the FTC has cleared Pfizer by dismissing all charges in the antibiotics case, including any questions as to price-fixing or the validity of our tetracycline patent. The decision confirmed the confidence we have always had that an objective examination of the facts would result in the complete exoneration of our company."

Robert L. Piper, hearing examiner for the FTC, issued an order that would dismiss the complaint in a decision which covered 195 pages, single-spaced, and analyzed every aspect of the case in detail. The examiner's decision and order become final unless appealed for review by the full commission.

The examiner concluded his opinion with the following statement:

"Concededly and understandably in a record of such vast size there are isolated items of evidence which, standing alone and without explanation, might cause suspicion or speculation of conspiracy. However, speculation and suspicion cannot replace proof.

"The decision must be based on reliable probative and substantial evidence upon consideration of the whole record. By such standards, counsel supporting the complaint have not sustained their burden of proof. Based upon a consideration of all the reliable, probative and substantial evidence in the record, it is concluded and found that the respondents have not engaged in any of the violations alleged in the complaint."

Referring to a Department of Justice anti-trust suit filed last August, Pfizer had the following comment:

"In reply to inquiries, the Department of Justice anti-trust suit appears to be based upon the same grounds as the Federal Trade Commission charges which the examiner has now dismissed."

Purina Will Build Michigan Warehouse

LANSING, MICH.—Ralston Purina Co. has announced plans to build a warehouse here to handle distribution of Purina Chows in the state of Michigan.

The firm has indicated that it hopes to occupy the 240 by 80 ft. building on the southwest edge of the city by March 10.

Speaking in regard to the new warehouse here, R. D. McGranahan, division sales manager, said, "If this follows the pattern of other places around the nation, in another year or two we will have a full-fledged mill here."

W. T. Lane, regional sales manager, said Purina plans to expand its sales force in the state of Michigan and launch an extensive advertising and promotion campaign for Purina Chows.

MANEY BROS. MILL & ELEV. CO.
Minneapolis, Minnesota
Distributors in the Upper Midwest States for
SMALL'S DEHYDRATED ALFALFA MEAL

"Shoulder to the wheel"

In the early days, when the best roads were little more than trails, it was quite common for wagons to become mired and stuck in the mud. It was then necessary to literally "put a shoulder to the wheel" in an effort to aid the horse in freeing the stuck vehicle. Even today, no halfway measures are implied by the expression; it still denotes a mighty and dedicated effort in behalf of a cause or project.

There's no need for you to become stuck when trying to select the dozens of individual ingredients to fortify your feeds. Not when Small's Dehydrated Alfalfa has "put a shoulder to the wheel" by providing more than 40 valuable nutrient elements and many other "unidentified factors" known to promote the growth and health of poultry, swine and cattle. We take extra care in the manufacture, storage and delivery to insure that you receive the full benefit of all these extra values . . . just one more reason why Small's Dehydrated Alfalfa is the first choice of discriminating buyers.

ARCHER-DANIELS-MIDLAND
ALFALFA DIVISION
BOX 356 • KANSAS CITY, MO.

FOR FEEDS WITH A FUTURE

Small's dehydrated alfalfa

Provisions of Proposed Turkey Hatching Egg Order Detailed

EDITOR'S NOTE: *Coincidental to the upcoming hearings which have been scheduled by the U.S. Department of Agriculture to receive evidence relative to the possible need and desirability of marketing orders and agreements for turkeys and turkey hatching eggs, a National Turkey Advisory Committee has prepared, with the help of USDA, proposed orders and agreements for consideration at these hearings.*

As a follow-up to announcement of dates and places of the hearings and summaries of the provisions of the proposed marketing orders and agreements which have appeared in Feedstuffs, this publication is reproducing details of the proposals so readers can be fully cognizant of their content before the hearings begin.

These reprints from the Federal Register include all provisions which do not concern the dates and places of the hearings and establishment and membership of advisory boards and administrative committees. Sections of the proposed orders dealing with these matters were summarized in the Nov. 4 issue of Feedstuffs.

Appearing below are certain provisions of the proposed marketing agreement and order regulating the handling of turkey hatchings eggs. Comparable provisions for the proposed marketing agreement and order for turkeys will appear in Feedstuffs Nov. 18. The first hearing on these proposals is scheduled for Nov. 20-22 at Richmond, Va.

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DEFINITIONS

§ **E-1 Secretary**—"Secretary" means the Secretary of Agriculture of the U.S. or any employee of the department to whom authority has heretofore been delegated, or to whom authority may hereafter be delegated, to act in his stead.

§ **E-2 Act**—"Act" means Public Act No. 10, 73d Congress, as amended, and as reenacted and amended by the Agricultural Marketing Agreement Act of 1937, as amended (Secs. 1-19, 48 Stat. 31, as amended, 7 U.S.C. 601-674).

§ **E-3 Person**—"Person" means an individual, partnership, corporation, association or any other business unit.

§ **E-4 Production area**—"Production area" means the 50 states of the U.S. and the District of Columbia.

§ **E-5 Hatching eggs**—"Hatching eggs" means turkey eggs which are acquired for the production of poults within the production area by hatching in incubators.

§ **E-6 Handle**—"Handle" means to set hatching eggs, in incubators for the hatching of turkey poults, or to receive such eggs at a hatchery for hatching, within the production area.

§ **E-7 Handler**—"Handler" means any person who handles hatching eggs, or causes hatching eggs to be handled, and includes a person who handles hatching eggs of his own production.

§ **E-8 Producer**—"Producer" means any person directly or indirectly engaged in the production of hatching eggs and who (1) has a proprietary interest in the eggs, or (2) who in a proprietary capacity operates and controls facilities for the production of hatching eggs and produces hatching eggs with such facilities. Provided, that for purposes of this part, if two or more persons are producers with respect to the same hatching eggs their respective percentage shares in the eggs for purposes of this order shall be deemed to be an amount of eggs equal to the total number of eggs so produced divided by the number of persons who are producers thereof unless a written contract between the parties relating to such production submitted to the Secretary or the committee provides for a different percentage distribution of interest.

§ **E-9 Type or breed**—"Type" or "breed" are synonymous and mean such classification of hatching eggs, by type or breed of turkey, as the committee may recommend and the Secretary approves.

§ **E-10 Board**—"Board" means the Turkey Hatching Egg Advisory Board . . .

§ **E-11 Committee**—"Committee" means the Turkey Hatching Egg Committee . . .

§ **E-12 Allotment period**—"Allotment period" means the 12-month period beginning on Oct. 1 of each year and ending on Sept. 30 of the following year or such other period as may be recommended by the committee and approved by the Secretary. Provided, that the initial allotment period shall be the period beginning with the effective date of this part and ending on Sept. 30, 1962.

§ **E-13 Fiscal year**—"Fiscal year" means the 12-month period from Oct. 1 in each year to Sept. 30 in the following year, or such other period as the Secretary, after recommendation of the committee, may establish.

MARKETING POLICY

§ **E-45 Marketing policy**—Prior to the beginning of each allotment period, or, for the initial allotment period, as soon as practicable, the board shall prepare and submit to the Secretary, through the committee, a report setting forth its general marketing policy for the allotment period. Notice of the board's marketing policy shall be given promptly by reasonable publicity to producers and handlers.

In the board's considerations and the report to the Secretary through the committee, the board shall include consideration of the probable supply of and demand for market turkeys for the ensuing turkey marketing year, including estimated opening inventory of market turkeys in all forms and desirable carryout inventory thereof at the end of such turkey marketing year, the number of hatching eggs which probably should be set in the allotment period to insure a sufficient supply of market turkeys for consumers, achieve the objectives of the act with respect to hatching eggs and be in the public interest, and such other factors as the board may deem relevant to any recommendation it may make for regulatory action in the allotment period.

The board may include in its marketing policy consideration and report relevant factors concerning such different regulation by types of hatching eggs for the production of breeder stock, and/or by production regions or districts as may be necessary to give due recognition to differences in production and marketing of hatching eggs in such areas.

Recommendations with respect to specific implementation of the general marketing policy recommended by the board shall be made by the committee from time to time, as circumstances warrant, and the committee's recommendation shall contain the data and information upon which it is based, together with the specific regulatory action recommended.

VOLUME REGULATION

§ **E-46 Volume regulation**—On the basis of the board or the committee recommendations or other available information, the Secretary may establish, for such period or periods as he may prescribe, regulation of hatching eggs by any one or more of the methods hereinafter specified if he determines that regulation by the method or methods employed may tend to effectuate the declared policy of the act. Such regulation may be based upon different desirable quantities established separately for different types of hatching eggs for the production of breeder stock, or for any or all portions of the production area; and when such desirable quantities are established for different types of hatching eggs, for the production of breeder stock, or by regions, the establishment of bases, allotments, or percentages under such regulation for producers or handlers shall be determined on the same basis.

Method No. 1

§ **E-47 Desirable quantity**—The Secretary may establish the desirable quantity of hatching eggs which all handlers may set, or cause to be set, in any allotment period. Provided, that such quantities may subsequently be increased, or diminished, for the allotment period.

§ **E-48 Allocation bases and allotments**—Whenever the Secretary has established a desirable quantity of hatching eggs to be set in the allotment period, the committee shall pro rate such quantity among handlers of hatching eggs who set or cause their eggs to be set by assigning to each handler an allocation base and allotment for the allotment period, computed as follows:

(a) **Allocation bases.** Each eligible handler of hatching eggs shall be assigned an allocation base computed, at his option, in one of the following ways.

1. The total number of the handler's own hatching eggs which the handler set, or caused to be set, in the 12-month period ending Sept. 30, 1961, or such other period as may be prescribed by the Secretary, or

2. The total number of the handler's own hatching eggs which the handler set, or caused to be set, in the 24-month period ending Sept. 30, 1961, or such other period as may be prescribed by the Secretary which shall be double the period specified under paragraph (1), divided by two, or

3. A handler who set no hatching eggs or caused none to be set in the period designated in (1) hereof, or whose setting of eggs in such period was not representative and who can establish that he has a plant and facilities for the hatching of hatching eggs and an established available supply of eggs may be assigned an allocation base by the committee in accordance with regulations recommended by the committee and approved by the Secretary, which shall take into consideration the hatching capacity of the establishment of such handler and his

(Turn to **HATCHING EGG**, page 98)

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Albany Turkey Order Hearing Scheduled

WASHINGTON—Albany, N.Y., has been added to a list of five other U.S. cities in which public hearings are scheduled on proposed marketing orders for turkeys and turkey hatching eggs, according to Charles S. Murphy, acting secretary of agriculture. The state office building will be hearing site in Albany Dec. 12.

The additional session was scheduled to accommodate producers and processors who would not be able to attend the Nov. 20-22 session in Richmond, Va., because of readying fresh turkeys for the holiday market, USDA said.

Other hearings, announced earlier, are: Des Moines, Iowa, Senate Chambers, State Capitol, Nov. 24-27; Las Vegas, Nev., Clark Court, Nov. 29-Dec. 1; Oklahoma City, Okla., Federal Office Building, Dec. 4-6, and Chicago, LaSalle Hotel, Dec. 8.

CENTENNIAL NUTRITION BOOK AVAILABLE

KANSAS CITY—Animal nutrition research findings are reviewed and brought up to date in a durable, handsome hard-cover book, "A Century of Nutrition Progress," which is now available.

This book presents in a single package the proceedings of the recent Centennial Nutrition Conference which the Midwest Feed Manufacturers Assn. sponsored in cooperation with the eight land-grant colleges and universities in its eight-state area.

Papers presented by noted college scientists cover subjects dealing with feed additives, proteins and amino acids in livestock and poultry rations, fats and fatty acids, livestock utilization of carotene and vitamin A, bloat, carbohydrate utilization, minerals, unidentified growth factors and nutrition under stress conditions.

Also of importance are observations by conference participants concerning the role of college and industry agricultural research as related to the feed industry in particular and to the human elements of our nation and the world in general.

Copies of "Century of Nutrition Progress" may be obtained for $6 each from Midwest Feed Manufacturers Assn., 20 W. 9th St. Bldg., Kansas City 5, Mo.

Jury's Verdict in Feed Case Reversed

MT. VERNON, WASH.—Charging a jury with employing "conjecture and speculation" in reaching its conclusion, Judge Charles F. Stafford here has reversed a jury verdict and denied damages it had awarded to a Mt. Vernon poultryman in his suit against Albers Milling Co.

Superior Court Judge Stafford handed down a 17-page memorandum opinion reviewing the evidence that had been presented during a legal battle between Richard Wick and Albers. He concluded that Mr. Wick and his wife were not entitled to the $15,385.70 damages awarded them June 16 by the jury.

The couple had asked for a settlement, alleging that feed sold them by the company proved unsuitable for their laying hens and had reduced egg production. The action was a countersuit, filed after the company filed suit to collect $65,885.70 due it for feed sold to the poultryman.

During the trial, the poultryman's attorneys attempted to show that the feed contained nicarbazin and was intended for fryers, not layers, according to the court records. As the trial progressed, feed technicians were flown in from across the nation to testify about the feed's contents. Experts took the stand for both sides as the question was argued.

Jury Not Convinced

The question became so paramount that the jury was polled specifically on this matter and replied that it was not convinced that the feed contained nicarbazin. When it came time to award damages, however, the jury said that while Mr. Wick was obliged

(Turn to **VERDICT**, page 99)

Dr. Salsbury's Plans Canadian Facilities

CHARLES CITY, IOWA—Dr. Salsbury's Laboratories, Charles City, has announced plans to construct manufacturing facilities in Woodstock, Ont., to service the poultry industry of Canada.

Dr. John G. Salsbury, firm president, said his company has leased approximately four acres on the southern edge of Woodstock. A building shell has been constructed there by the Woodstock Development Commission.

Dr. Salsbury said that the announcement of when production begins will be made when the building is completed and equipment is installed. The operation will be conducted by Canadians.

Dr. Salsbury's products are distributed in many countries. The company manufactures pharmaceutics, biologics and feed additives for poultry and swine.

RECOGNITION—During the Centennial Nutrition Conference in Kansas City, which was sponsored Oct. 23-25 by the Midwest Feed Manufacturers Assn. in cooperation with land-grant colleges and universities in the association's eight-state area, a number of persons received special recognition for their efforts in behalf of the conference. Walter Hoffman, president of Hoffman-Taff, Inc., Springfield, Mo., is shown in the first photo. His firm was praised by the association for contributing to the success of the conference by providing funds for publishing a hard-cover book, "A Century of Nutrition Progress," containing proceedings of the event.

In the second photo are Jay Richter (left), centennial director, American Association of Land-Grant Colleges and State Universities, and Dr. C. M. Hardin, chancellor, University of Nebraska. Mr. Richter worked with the Midwest group in organizing the Centennial Nutrition Conference, and Dr. Hardin accepted, in behalf of the nation's land-grant colleges, the challenge of "assuring ourselves and the rest of the world that we can continue to feed our growing population and feed them well."

In the third photo, James W. Symington (left), deputy director of Food for Peace, is asked by Lloyd Larson, executive vice president of the Midwest Feed Manufacturers Assn., to deliver to President Kennedy a copy of essays on careers in agriculture autographed by land-grant college students who wrote them as entries in a contest sponsored by the Midwest association.

In Cattle Experiments

Performance Okay on All-Concentrate Diets Using Shelled Corn

BUFFALO—Beef cattle have performed satisfactorily an all-concentrate rations based on ground shelled corn in research at North Carolina State College.

This was brought out by Dr. M. B. Wise of North Carolina State in a paper presented at the Cornell Nutrition Conference. Dr. Wise reviewed other research in this field, including the extensive work with barley and its "built-in" roughage.

For some time, the North Carolina researchers have been studying various facets of the concept of all-concentrate diets for beef cattle. This has included use of rations based on ground shelled corn and urea and in some cases soybean oil meal. Included has been a study of the use of rumen buffering agents, including sodium and potassium bicarbonate and calcium carbonate.

Summarizing four experiments involving a total of 138 calves and yearlings, Dr. Wise said the following statements seem justified:

1. Beef cattle have performed satisfactorily on all-concentrate rations based primarily on ground shelled corn when all nutrient requirements were supplied by the ration.

2. Addition of hay in long or ground form did not increase performance of calves fed an all-concentrate diet based on ground shelled corn and urea.

3. Agents used to enhance buffering capacity have not proven beneficial in these studies; however, further work is needed in this area.

4. Very favorable feed/gain ratios have been obtained when all-concentrate rations were fed.

5. Problems with bloat, diarrhea and founder have not been encountered under conditions of the research reported.

Dr. Wise said the work shows that all-concentrate feeding as described can be another method of feeding cattle. Fiber has been very low in rations used—only 1.5%.

He noted that there is an art in taking hay away from animals going on the all-concentrate diets. He went

(Turn to ALL-CONCENTRATE, page 97)

Five Promotions Are Announced by Pfizer

NEW YORK — Five promotions have been announced within the sales staff of the agricultural division of Chas. Pfizer & Co., Inc., New York.

Robert J. Brown, formerly veterinary industry manager at division headquarters, New York, has been appointed northeastern regional manager for Globe Laboratories, Ft. Worth, Texas, a new acquisition of Pfizer recently approved by Globe stockholders. Mr. Brown joined Pfizer in 1955 as veterinary sales representative.

R. Joe Taylor has been named coordinator of new product development for the Pfizer agricultural division. Formerly feed supplement product manager, Mr. Taylor joined Pfizer in 1952 as an agricultural sales representative.

Robert M. Walus has been named veterinary products manager, with headquarters in New York City. He joined Pfizer in 1959 as an agricultural sales representative in the midwestern region.

Wally Houle, midwestern agricultural sales representative, has been promoted to feed supplement product manager with headquarters in New York. He joined Pfizer in 1960.

Earl C. Lyon, formerly an agricultural sales representative for Pfizer in the eastern region, has been named to the agricultural product manager staff, with headquarters in New York. Mr. Lyon joined Pfizer in 1960.

CORNELL CONFERENCE—Some of the speakers at the Cornell Nutrition Conference in Buffalo are pictured here. All are from Cornell University unless otherwise indicated. In the first photo are: Front row, left to right, Dr. R. J. Young, Dr. D. E. Ullrey of Michigan State University and D. T. Hopkins. Back row, Dr. W. G. Pond, Dr. R. A. Wentworth, Dr. J. K. Loosli and Dr. R. G. Warner. In the second picture are Dr. J. T. Reid, Dr. J. I. Miller, Dr. M. B. Wise of North Carolina State College, Dr. D. E. Hogue, the program chairman, and Dr. M. C. Nesheim.

Cornell Conference Provides Look at Some 'New Frontiers' in Animal Nutrition Research

By ROGER BERGLUND
Feedstuffs Managing Editor

BUFFALO—There continue to be some "new frontiers" in animal nutrition, and it looks as though feed manufacturers as well as public and private researchers should be taking a look at the implications of some of the possible developments in newer areas of research.

Examples of research which bear watching—over the longer term if not always immediately—are in the field of nutrition-disease relationships and in the possibility of modifying animal products through nutrition (such as altering the amount and type of fat in end products).

These and many other areas of research came in for attention at the big Cornell Nutrition Conference this year. The conference, sponsored by Cornell University in cooperation with the American Feed Manufacturers Assn., brought nearly 600 feed and allied industry men to the Hotel Statler in Buffalo.

How important are relationships between infectious disease and nutrition? One speaker said that nutrition may take a place beside drug therapy and immunology in controlling disease, and some of the greatest interest among delegates was shown in talks relating to this subject.

How about the necessity of using nutrition to alter end products? One speaker said that there is some faddism in the current fat-heart disease discussions, but he warned that the scientific facts eventually developed could turn out to be contrary to current agricultural interests.

Other conference talks underscored other recent nutritional developments of significance—some of immediate interest as well as some of a more basic nature—and some of the reports are summarized here; others will be reviewed later. (The complete conference proceedings is available for $1.50 from Animal Husbandry Department, Cornell University, Ithaca, N.Y.)

NUTRITION AND DISEASE: THE END OF THE INCUBATION PERIOD OF AN IDEA—What is the relation of nutrition to resistance to infectious disease? Dr. Howard A. Schneider of the Rockefeller Institute, New York, asked and answered this question. "The answer to this question has been incubating a long time," he said. "I think its incubation is just about over and the answer now begins to emerge with increasing clarity."

In connection with the question, he emphasized the importance of bringing the sciences of nutrition and genetics into "fruitful contact." "A solution to this problem," he said, "will be the key to unlocking the next great advance in the science of nutrition, to bring forth a burst of discoveries which will pale what has come before."

In infectious disease, it appears, the role of nutrition is relatively small compared with the genetic factors. But if it is small, it is capable of being enhanced in a way that is not open to a similar attempt to manipulate these events by genetic constitution, said Dr. Schneider. By identifying the nutritionally active component, we can, by concentrating it, redesign the nutritional environment and thus elevate the relative importance of this factor. He went on to present the analysis from which he made these inferences. Included was information on a mouse population subjected to a test infection. The nutritional entity which was manipulated was the "salmonellosis resistance factor," which was traced in whole wheat and which has now been concentrated a million-fold.

Dr. Schneider showed the means by which scientists may find nutrient identities to deal with infectious diseases.

The general prospect, Dr. Schneider observed, is that the nutritional environment has a more detailed, a finer structure than is presently recognized.

STUDIES ON THE EFFECT OF DIET ON THE RESISTANCE OF CHICKS TO SALMONELLA GALLINARUM INFECTION — Nutrition some day may take a place beside drug therapy and immunology in controlling disease, a leading poultry specialist said.

In spite of many complexities, it is clear that nutrition can have an effect on the response of an animal to infection, said Dr. C. Hill of North Carolina State College, now on leave at the Rockefeller Institute in New York City.

These observations were made by Dr. Hill in reporting on work on the effect of diet on resistance of chicks to Salmonella gallinarum. Scientists grew the chicks on experimental diets until they were four or five weeks old. The birds were then inoculated with several million organisms. The disease was allowed to run its course, and the death rate was recorded. One area of study has been on effect of protein levels.

Protein levels of 10, 20 and 30% were studied, using soybean oil meal changes to vary the protein level. In the first study, chicks fed the higher level of protein died faster than those fed the lower level. This finding was unexpected, and studies were continued. Energy levels were studied, but the caloric content of the diet had no effect on results. Chicks fed the higher protein levels died faster than those on the lower levels.

To see whether soybean meal might contain some factor which increased susceptibility to infection, casein was used as a source of protein, but results were the same as before.

Dr. Hill and associates had previously reported that high levels of vitamins increased resistance to disease, and they decided to consider whether there might be a relationship between the observations with protein levels and vitamin levels. The three protein levels were fed as before and, in addition, the vitamin level was increased 10-fold in one series. Results with normal vitamin levels were as before; chicks on the higher protein levels died faster than those on 10% protein. With the high vitamin level, there was a different pattern. During early stages of the disease, there was no significant difference among protein levels, but by the end of the experiment, mortality at the 20% protein level was higher than at 10 or 30%. These results leave the role of protein levels on response to

(Turn to CORNELL, page 97)

CORNELL CONFERENCE MOVES TO CAMPUS

BUFFALO — Next year's Cornell Nutrition Conference will be held on the Cornell University campus at Ithaca, N.Y., instead of at the Hotel Statler in Buffalo. This was announced at the 1961 conference last week.

The 1962 conference has been set for Sept. 5-7.

Cornell officials said the move back to Ithaca was decided upon for a number of reasons: (1) 1962 marks the centennial celebration of the Land Grant Act; (2) the Cornell staff wishes to reinstill into the conference the university atmosphere which brings to delegates the realization that this is an important teaching function of Cornell rather than just another meeting; (3) those attending the conference should have the opportunity to acquaint themselves with the new research facilities at Cornell.

The time of the conference is being changed from November to early September in order to hold the conference during a period when students are not on the campus so that there will be adequate housing for the delegates.

UNDERTONES

(Continued from page 1)

It is a possibility that this investigation might lead to some upward adjustment in handling charges at country houses. During the Symington committee investigation there were some members of that staff who believed that the U.S. Department of Agriculture at that time cut back the rates for handling at country points too sharply.

Whether USDA plans to reopen the Uniform Grain Storage Agreement next year depends upon what the survey reveals. Since there is extreme pressure on USDA and all other government agencies to cut spending to the bone, it is likely that USDA will grasp at every opportunity to reduce its operating costs.

USDA will have a fortified case in this study since the warehouses to be examined will consist of a selected list from those which were studied in 1959.

Has Ownership Change

CENTER, TEXAS — Gene Biddle has purchased the interest of C. B. LaFitte in East Texas Milling Co., Center, Texas, it was announced.

Mr. LaFitte stated he was disposing of his mill interests because of his withdrawal from the feed and broiler production business, and he plans to concentrate his time and efforts in the commercial egg production and marketing field.

East Texas Milling Co. was formed in 1956 with Mr. Biddle and Mr. LaFitte each owning 50% interest. A new mill was built at that time, and has been expanded several times to a present capacity of 15 tons per hour.

No changes in the operation or management of the mill are planned, Mr. Biddle said.

ILLINOIS

(Continued from page 1)

Myren, Springfield, treasurer, and Dean M. Clark, Chicago, executive secretary.

Directors by area are: Area 1, New Berlin, Mr. Myren, M. D. King, Mr. Hewitt; area 2, Centralia, Frank Bower, Clay Herrington, Dan G. Jones; area 3, Charleston, Francis Luedke, Jack Ellis, Robert Pierson; area 4, Dwight-Pontiac, Virgil Morris, W. R. Sterrenberg, Edwin Ringger; area 5, Dekalb, Eugene Litwiller, Mr. Marlowe, Lloyd Alexander; area 6, Galesburg, John Bonnett, Willis Sauder and Herbert Hoeman.

IPHF officers elected are: President, Don Young, Illiopolis, DeKalb Agricultural Assn.; 1st vice president, William Frakes, Ettingham, Great Plains Hatchery; 2nd vice president, Lee Loomis, Chatsworth, Loomis Hatchery; executive secretary-treasurer, Aubrey Harless, Shelbyville; APHF director, Charles Meler, Nashville, Nashville Hatchery.

Awarded plaques for being outstanding salesmen on the armory exhibit floor were E. D. (Bill) Helgen, Dr. Salsbury's Laboratories, Decatur; Charles J. Hawkins, Hawkeye Steel Products Co., Peoria, and James Hayes, Anchor Serum Co., Springfield.

The Illinois Feed Assn. approved a resolution opposing government marketing orders on poultry and livestock.

The 750 persons attending the convention heard several talks by speakers on a variety of subjects and attended business sessions.

On European Trip

MOBILE, ALA.—W. J. Westerman, vice president of Southern Industries Corp., Mobile, parent firm of Oyster Shell Products Co., and Mrs. Westerman are making a western European trip. They were married recently in Mobile. Mrs. Westerman is the former Mrs. Inez Sellers of Mobile.

Arlo V. Turner, widely known feed and poultry industry leader, is pictured at his desk in The Grange Co. offices in Modesto, Cal. Mr. Turner recently sustained a cracked vertebra in an accident, but, wearing a special brace, he has been up and around much of the time and is recovering rapidly. He expects to "throw the braces away" soon.

California Company Favors Turkey Marketing Agreements

MODESTO, CAL. — The Grange Co., a major feed and poultry firm in California, is among those favoring marketing agreements and orders for the turkey industry.

During its 87-year history, the company has engaged in warehousing, feed manufacturing and flour milling, and its principal business activity today is the production of several of California's principal crops, including large operations in turkeys, broilers, grain and beef cattle.

Arlo V. Turner, chairman of the board of The Grange Co., was interviewed recently in Modesto on developments in the industry, the history of his company and the proposed program for turkey hatching eggs and market turkeys.

Mr. Turner made this statement on marketing orders and agreements:

"The Grange Co. believes that the judgment of large groups of American citizens is better than that of any individual, or any segment of an industry, that this judgment by people who exercise their right to vote by secret ballot is the reason for the progress of this nation.

"It believes that producers of any crop which is widely produced have a right to and should be given an opportunity to vote on how their business should be operated, subject only to the public welfare as determined by Congress and by administrations which effectuate statutes enacted by Congress.

"It believes that the turkey and broiler industries should have the privilege of using the same tools which business uses, including the right to limit production to market demand at a fair price to producers; that certainly producers of every crop should be given opportunity to vote on whether they want to operate on a dog-eat-dog basis, or to run their business in an efficient way within guidelines established by Congress, which guidelines are necessary for the public welfare.

"It believes that marketing agreements and/or orders are, today, the only tool available to producers to effectuate sound business practices."

The Grange Co. was organized by 100 farmers, all members of the National Grange of the Patrons of Husbandry, in March, 1874. Following two financial difficulties, many of the farmers withdrew. The capital stock of the corporation is still largely owned by descendants of some of those incorporating farmers, Mr. Turner pointed out.

Arlo Turner, now chairman of the board, was president from 1937 to 1956. He is the fourth member of his family who served as president, the present president being a brother, Everett W. Turner. Arlo Turner practiced law before returning to the company as an executive officer. Since his teens he has been active in crop production. He discontinued farming operations for himself in 1939.

Company officials in addition to Arlo and Everett Turner include Arlo's sons, Henry and Paul Turner, vice presidents. Dr. H. J. Almquist, widely known nutritionist, is vice president and director of research. Arnold W. Wagner is purchasing agent, and K. A. Nesseth is feed plant manager. C. T. Johnson heads the turkey department, Harley Brannan the chicken department and Chuck Solomon the cattle department.

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QUESTIONS

(Continued from page 1)

—If hatcheries are limited in the number of poults they can hatch, where is the incentive to improve breeding and performance? Might they be able to let quality deteriorate and still sell their entire "quota"?

—If there is no control on producers, could large commercial producers bid the price of poults up and out of reach of small growers?

—With controlled production, can prices charged by hatcheries for poults and prices paid by "handlers" leave the grower squeezed from both ends?

—Does this keep marginal, inefficient operators in business and preclude the possibility of sound expansion on the part of efficient growers?

—How much will this raise the price of turkeys in the grocery store? Will people eat more or less?

—Could a hatchery and processor form a company and use their allotments entirely for their own use, either building their own raising facilities or forcing present producers to contract-raise for them?

—Will there be any ceiling or floor on the price of "free market" turkeys?

—Who will decide or fix the price on "set aside" turkeys? Will it always be lower than "free" turkeys?

—If a hatchery goes out of business for any reason (fire, flood or death), what will happen to its quota? How will its customers be assured of their fair share?

—If a grower has suffered this year through inferior quality poults, how will he be able to change suppliers under the new plan?

—Will the proposal place temptation before hatcherymen to play favorites, accept favors, start a black market?

—Even if a majority of producers vote down the plan, can their vote be overridden by the minority of producers who may have a greater numerical total of turkeys?

—How much freezer space will be required to handle "set aside" birds? What will it cost? Who will furnish the money? How many turkeys can we store—how long will they keep? Could it lead to potato-type dumping?

"Now is the time to get these questions answered so we can arrive at an intelligent decision rather than one based on fear, resentment or panic," Mr. Palm told the Texas turkeymen.

Mr. Palm also reviewed the development of turkey production contracts, and analyzed demands of present-day contracts on both producers and processors.

"Regardless of whether tomorrow's turkey man chooses to enter some form of contract production or to rely on his own initiative and the free-enterprise system, his opportunity and success will be in direct proportion to the thought, study and consideration he invests," Mr. Palm said.

Business planning, skillful management and planned marketing will be the key to success or failure in turkey production, he predicted.

INTEREST PURCHASED

MOLALLA, ORE.—James Bentley has purchased the interest of Frank Lewis in the Lewis & Bentley Feed Store here. The firm name will remain the same for the present.

SUPERSWEET

(Continued from page 1)

in northeast Danville. A spur railroad track will be built to deliver inbound ingredients to the plant, and interstate highway 74 is available for truck pickups and deliveries.

Darrell M. Runke, general manager of Supersweet Feeds, says the plant will use the latest manufacturing techniques to produce over 70 scientifically balanced feeds. The plant will have facilities for bulk handling and storage of products.

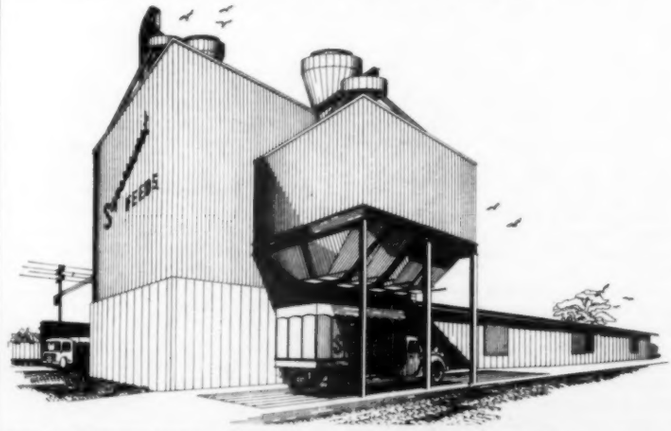
Adjacent to the plant will be a 50-ton scale to obtain weights on incoming truck shipments and to weigh outgoing loads of finished feeds.

Gene Gresham, sales manager at Supersweet's Monmouth, Ill., plant, has moved to Danville as sales manager. He will coordinate sales activities while the plant is under construction.

According to Mr. Runke, storage facilities for bulk finished feed above the truck scale will discharge feed at the rate of two tons per minute to provide customers with prompt deliveries.

"When the mill is in full production, we'll be able to provide freshly mixed feed to any point in our area of distribution within 24 hours after the order is received," he said.

The new plant at Danville will be Supersweet's 11th operating U.S. formula feed mill since the division was established in 1952 by International Milling Co. Other plants are located at Monmouth, Ill.; New Hampton, Des Moines and Le Mars, Iowa; New Ulm and Willmar, Minn.; Fremont and Grand Island, Neb.; Salina, Kansas, and Madison, Wis.



NEW ILLINOIS MILL—This artist's conception shows how the new Supersweet Feeds mill at Danville, Ill., will look when completed.

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that's the amount of zinc bacitracin (Baciferm) per ton of feed that increases broiler profits $6 to $22 per 1000 birds.

That's all. 4 grams. And broiler profits can increase $6.55 per 1000 birds to $22.58 per 1000 birds. That's what Baciferm zinc bacitracin antibiotic supplements do for you.

The proof? We have just completed calculations on the results of *six* recent tests conducted in different parts of the country involving over 14,000 birds! The summary below highlights the pertinent facts and figures. See for yourself why Baciferm makes such good business sense (and dollars) in *your* broiler feeds. These results confirm the data from scores of tests run during the past several years.

	NUMBER OF BIRDS	EXTRA PROFIT PER THOUSAND BIRDS OVER CONTROL (4 GRAMS ZINC BACITRACIN PER TON)
CSC TEST #23	524	$15.34
COLLEGE TEST #58	964	$13.95
COLLEGE TEST #60	300	$ 9.50
FEED MANUFACTURER'S TEST #78	12,000	$ 6.55
COLLEGE TEST #62	600	$21.85
COLLEGE TEST #63	150	$22.58

BASIS: market price of broilers 16¢ per lb.; feed cost 4½¢ per lb.; zinc bacitracin 7¢ per gram.

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'Fat Facts'

California Conference Covers All Aspects of Fat Use

By ROGER BERGLUND
Feedstuffs Managing Editor

FRESNO, CAL.—Fats continue to be very much in the news in both animal and human nutrition, and "fat facts"—from the basic chemistry, through effects in animal feeding and on to role of fats in human nutrition—were a major topic at the California Animal Industry Conference in Fresno.

Just about all aspects of the overall subject were developed by speakers from the University of California and elsewhere. This included practical considerations and new findings in poultry and livestock feeding. Also there was information on the effects of diet on the fatty acid composition of animal products, a topic expected to be of increasing importance because of the public interest in types of fat which are eaten.

The conference, attended by some 350 persons, was sponsored by the University of California at Davis and the California Hay, Grain & Feed Dealers Assn.

Summaries of several of the presentations follow:

FATS IN POULTRY NUTRITION—Dr. W. F. Hill, head of the poultry husbandry department at the University of California, reviewed research and information on the role of fats in poultry nutrition. From the view that the bird has only a limited tolerance for fat, scientists have come to recognize that fats can be used at extremely high levels and that they have special beneficial properties which are valuable in practical rations. The proper use of this valuable feeding resource, said Dr. Hill, depends on quantitative evaluation of its contributions in energy, essential fatty acids, growth stimulating effects and other special properties.

Dr. Hill discussed the contributions of fats to poultry rations and some of the practical considerations involved.

Energy—The major contribution is energy. Feeding values of fats and fatty acids differ in accordance with the efficiency of their digestion and absorption. Comparative values of different fats can be expressed either in metabolizable energy or percentage utilization (absorbability). Representative values are shown in Table 1.

TABLE 1. Metabolizable Energy and Absorbability of Representative Fats for Chickens

	Metabolizable energy Cal./lb.	Absorbability %
Corn oil	4,000	93
Degummed soybean oil	4,200	98
Soybean lecithins	3,060	86
Soybean fatty acids	3,750	89
Soybean soapstock	3,150	75
Hydrogenated shortening	3,250	76
Beef tallow	2,860	67
Pork fat (lard)	3,980	93
Feed grade tallow	3,230	76
Hydrolyzed animal and vegetable fat	3,230	78
Fish oils	3,660	86

Values determined mainly with chicks, using fat at 20% of diet, in studies at Cornell University.

Substitution of fat for carbohydrate, taking into account best balance between energy and other nutrient levels, will increase energy concentration and will produce a proportional increase in feed efficiency. Depending on circumstances there may be an increase in productive performance. With layers, increased energy level tends to improve egg production rate in cool weather. With growing birds, there may be significant improvement in growth rate, depending on type of fat and other circumstances. The fluid vegetable oils and highly digestible animal fat (as lard) are effective in stimulating growth.

The data in Table 1, Dr. Hill noted, indicate large differences in energy value among fats. Even larger differences exist among fatty acids. A fundamental question of importance is whether the extent of utilization of a fat is influenced by level of feeding or by admixture with other fats in the diet. Available evidence indicates that level of feeding is not a major factor influencing absorbability. Variable results have been obtained as to degree of improvement produced by mixing a highly absorbable and a poorly absorbable fat. It appears that under some circumstances, a mixture of fats is better utilized than would be expected from the values of its components.

Physical—The "conditioning" or "dressing" effect is considered of some importance by some, and there are some mechanical advantages to the reduction of dustiness. It is possible that palatability is improved under these conditions. However, experiments to determine whether the change in physical nature of the diet is a major contribution of fat are inconclusive.

Studies with practical broiler rations suggest that fat supplementation and pelleting produce similar effects. Fat stimulated growth when used in a mash ration, but similar growth stimulation occurred when the low-fat ration was pelleted; the combination of fat supplementation and pelleting was no more effective than either alone.

Special Properties of Fats—Vegetable oils and other highly digestible fats stimulate growth of chicks when used in both purified and practical diets. Growth rate is increased by about 10% in practical diets, and requires the use of 5-8% of such a fat. The extent to which this growth stimulating effect can be attributed to essential fatty acids, energy contribution and possible unidentified factors is yet uncertain. Certain fats also increase efficiency of utilization of energy in metabolic processes. It has been found with growing chicks that fat-supplemented diets produce greater tissue synthesis and retention of energy than low-fat diets. Another special property is the increase in egg size resulting from use of highly digestible fats.

Essential Fatty Acids—Many species, including the rat and human, have been shown to require the polyunsaturated fatty acids (linoleic or arachidonic acids) as dietary essentials. Linoleic acid has been shown to be markedly growth stimulating when added to fat deficient diets for chicks. Furthermore, it has been shown that the chick, like other animals, cannot synthesize linoleic acid. The quantitative requirement for linoleic acid has not been accurately determined; furthermore, it is not certain whether the growth stimulating property of fats can be explained entirely by essential fatty acid content because the quantitative requirements for fats and particularly fatty acids have not been established. In the rat, the essential fatty acid (EFA) requirement is about 1-2% of dietary calories. This is lower than the EFA content of the amount of fat needed for maximum growth in chicks. It would appear that either the requirement is substantially higher than this level in the chick, or that the unexplained growth stimulating properties of fats are due to some additional factor.

Practical Considerations—Economical value of fats in practical rations is mainly determined by relative metabolizable energy and growth stimulating properties. However, the most highly digestible fats, vegetable fats, are also valuable for human uses, and they are normally out of economic reach for feeding. Under some economic conditions, full-fat soybeans may offer a means of using vegetable oils at significant levels.

By-product fats, including tallows, greases and fractions from fat processing, are widely used in feeding. Some which are primarily based on vegetable oils and pork fat are quite high in energy value; those which are primarily beef and mutton fat are lower in energy. The free fatty acid content of blends of fatty acids and neutral fat fractions is not an indication of "quality" in the sense of indicating deteriorative changes because feed fats in general are stabilized by antioxidants. However, utilization of free fatty acids is generally lower than the same fatty acids would be in intact fats.

Level of added fats is limited only by cost and mechanical considerations. Mechanical factors generally limit fat to levels below 10%.

In addition to beneficial effects, we should recognize possible limitations. For instance, certain heavy breed hens are evidently unable to control feed intake accurately and tend to become obese when fat rations are very high in energy. Also, suddenly introducing a high level of fat into a ration for high production layers may produce temporary over-consumption of feed.

FATS IN LIVESTOCK FEEDING—Dr. Hubert Heitman, Jr., of the University of California presented an extensive review of information on the use of fats in livestock feeding to supply energy, rather than their use to supply possible essential nutrients.

Summarizing the presentation, he noted that various fats can be used as efficient sources of energy by meat animals. Fats differ in their efficacy, no doubt because of their physical and chemical characteristics. Swine can tolerate levels up to at least 10% of the total ration, and in most cases there is improvement in gain and feed conversion. The latter is probably due to more concentrated rations.

Sheep and cattle use fat less effectively than swine. Whereas 5%

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added fat may be well tolerated and cause weight gain or feed conversion improvement, 7 to 10 or 15% made rations unpalatable and interfered with normal performance.

Addition of fat to dairy rations may result in a quick but transitory increase in milk fat test. Over longer periods of time up to 110 days there is some evidence that 4% of fat in the grain mixture fed at a rate of 1 lb. for every 3 to 3½ lb. of milk with hay and silage will cause a greater production of 4% FCM than lower fat levels. Levels over 5% were slightly better than 4% in this regard. Other workers have found that 3% fat in the grain mixture was as good as 4.7 to 5%. These studies are complicated by different or indeterminate roughage levels, different feeds in different lots, extraction of grain mixtures and varying quality of the roughages.

EFFECTS OF DIET ON THE FATTY ACID COMPOSITION OF ANIMAL PRODUCTS—With increased interest in types of fat eaten by humans, there is interest in information on the effects of diet on the fatty acid composition of animal products. Dr. D. W. Peterson of the University of California noted that fats have distinctly different properties, depending upon the fatty acids present in the fat. Individual fats fed to animals may result in changes in the composition of the fat of animal products, sometimes conferring on them unusual or undesirable properties.

Fatty acids of animal tissues originate in three ways: (1) Synthesis by the animal from carbohydrate or protein, (2) direct incorporation of dietary fatty acids into the tissue fat, (3) conversion of dietary fatty acids to other fatty acids incorporated into tissue fat.

With the exception of milk fat and some marine fats, the predominant fatty acid in animal products of economic importance is oleic acid. Present in the next highest concentration is palmitic acid. In ruminant body fats, high levels of stearic acid are also present.

Linoleic acid and linolenic acid are present in variable amounts and arise from dietary sources since animals cannot synthesize these fatty acids. Arachidonic acid is synthesized from linoleic acid.

Non-Ruminants in General—Dr. Peterson noted that when the diet is almost fat free, or if the fat is highly saturated, the polyunsaturated fatty acids (2 or more double bonds) of the animal fat tend to drop to very low levels. There may sometimes be an increase in the proportion of saturated fatty acids. Feeding highly unsaturated fats such as some vegetable oils containing linoleic or linolenic acids or fish oil containing highly unsaturated fatty acids will result in these fatty acids being deposited in the tissues. The amount deposited is to a certain extent related to the amount of unsaturated fatty acid in the diet.

More than 30 years ago it was shown that pork with a soft oil fat of low melting point results from feeding such fats as peanut oil, corn oil or bean oil. Also discovered was the interesting fact that cottonseed oil, which might be expected to have a similar effect, produced, instead, a hard fat. Feeding up to 8% cottonseed oil did not lower the melting point of the fat. While the linoleic acid content increased as expected, there also was a marked increase in stearic acid, which explained the high melting point. At that time there was no explanation of this. (See section on eggs below.)

Increasing the polyunsaturated fatty acid content of pork by dietary treatment is also likely to decrease stability of the fat, resulting in rancidity and off-flavors.

Poultry—Feeding highly unsaturated fat to poultry even at low levels readily increases unsaturation of carcass fat. However, this will result in acceleration of rancidity during storage. The fat may be made more stable by feeding tocopherols, but since the turkey has less ability to deposit tocopherol in the tissues than the chicken, turkey fat will become rancid more quickly. Fatty acids with three or more double bonds will produce fishy off-flavors in turkeys. As little as 0.4% of fish oil or 2% lin-

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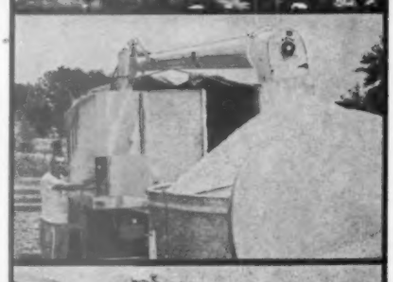

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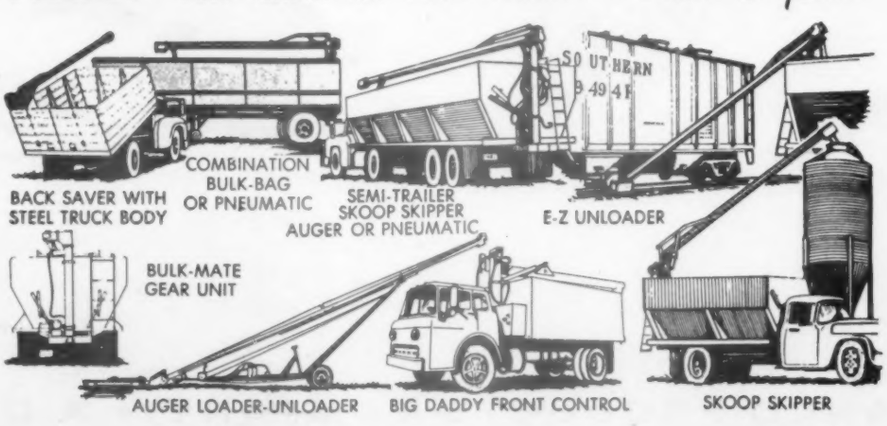

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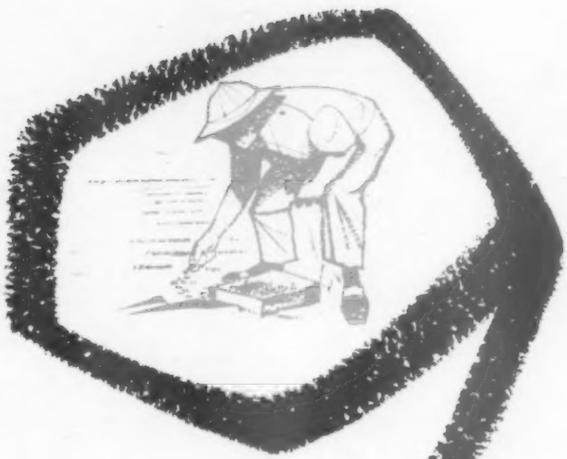
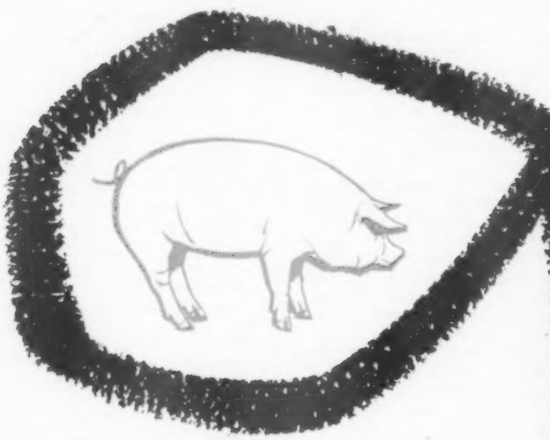


From a Missionary in Thailand: The Discovery of TYLAN

Among thousands of soil samples sent to the Lilly Research Laboratories from all over the world, one, collected by a medical missionary from a rice paddy in Thailand, contained a new antibiotic which immediately showed great promise for agricultural use. It was called Tylan and proved to be a gain booster for swine.



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seed oil in the diet has produced fishy flavored turkeys.

In general, on feeding of polyunsaturated fatty acids to poultry, the polyunsaturated fatty acid displaces oleic acid in the body fat, there being practically no change in level of saturated fatty acids. However, there is at least one case where this is not so. On feeding 10% coconut oil to hens, the level of saturated fatty acids was doubled, going up to 66% of total fatty acids.

Eggs—Fatty acid distribution in egg yolk also is affected by feeding polyunsaturated fatty acids. In general, when oils high in polyunsaturated fatty acids are fed, these acids displace oleic acid. The saturated fatty acids remain fairly constant, with one notable exception (discussed below). Linolenic acid is not as readily deposited in the egg as linoleic acid. It is noted that high levels of fish oil or linseed oil produce off-flavors in eggs.

Of great interest, said Dr. Peterson, is recent work on the cyclopropene fatty acids in cottonseed and other malvaceous plants. Shenstone and Vickery isolated a fatty acid from these plants which contained the cyclopropene ring and which they named malvalic acid. This fatty acid when fed to hens produced the characteristic changes in eggs associated with feeding cottonseed oil, such as increased permeability of the yolk membrane, which produces the pink white and the increase in pH and water content of the yolk. Masson and others later reported that similar results could be obtained with another cyclopropene acid, sterculic acid, isolated from Sterculia foetida oil. Simultaneous feeding of Sterculia foetida oil and gossypol intensifies the discoloration of the egg yolk, apparently because of its effect on increasing the pH of the egg yolk. Cottonseed oil contains both malvalic and sterculic acid.

Also interesting is the finding that feeding either cottonseed oil or Sterculia foetida seeds brings a marked increase in stearic acid in the yolk. This helps explain the peculiar spherical shape of the cold yolks of eggs from hens fed cottonseed oil, which had been noted previously. This effect of cottonseed oil in increasing stearic acid content of egg yolks also agrees with the earlier work showing that cottonseed oil increased the stearic acid content of pork fat.

Ruminants—The body and milk fats of ruminants are distinguished from most other animal fats by their highly saturated fatty acid content. The unsaturation of the fat is little affected by the dietary fat, although small amounts of polyunsaturated fatty acids undoubtedly of dietary origin can be found in the depot fats and in milk fats. The high degree of saturation is explained by the fact that a considerable degree of hydrogenation of the dietary fats is performed by the rumen microorganisms before absorption of the fatty acids.

CHEMISTRY AND BIOCHEMISTRY OF FATS—Dr. A. L. Tappel of the University of California went through a basic explanation of the chemistry and nomenclature of fats by outlining a classification of lipids.

He observed at the outset that important reasons for study of the chemistry and biochemistry of fats or, in more general terms, the lipids, are: (1) Lipids supply 9.5 cal./gm. or about twice the amount supplied by either carbohydrate or protein on a weight basis. Usually a large percentage of the calories in an animal's diet is supply' by lipids. (2) The essential fatty acids, linoleic and arachidonic acids, should be in the diet at 1-2% of the caloric intake. (3) Lipid is the solvent in which vitamins A, D, E and K are absorbed. (4) Certain lipids like cholesterol are important in animal metabolism and of particular notoriety. (5) Oxidative fat rancidity is one of the most extensive chemical deterioration problems in the feed industry.

DIGESTION AND ABSORPTION OF FAT—Dr. Ruth Renner, well known for her work at Cornell University on fats and energy, reviewed theories of fat digestion and discussed recent studies on fat absorption in the chick.

Dr. Renner, now at the University of Alberta in Canada, noted that evidence in support of the particulate theory of fat absorption in the chick has been obtained through studies of factors affecting the absorbability of palmitic acid. This theory holds that digestion in the gastrointestinal tract proceeds only far enough to yield sufficient monoglycerides and free fatty acids, which, together with the bile salts, emulsify the remaining triglycerides. According to this theory, the main bulk of fat is absorbed as triglyceride. According to the hydrolytic theory, fat is completely hydrolyzed in the intestinal tract to free fatty acids and glycerol. The fatty acids are emulsified with the aid of bile and are absorbed as such.

Results have shown, Dr. Renner said in summarizing her paper, that the absorbability of palmitic acid can be improved by feeding in mixtures with graded levels of unsaturated fatty acids the triglyceride triolein and the monoglyceride monoolein, but the degree of improvement achieved is considerably less than obtained when palmitic acid varies with position in the triglyceride molecule, being higher when located in the 2-position than in the 1-position.

In additional studies, it was found that the site of most active fat absorption in the chick is the middle fifth of the small intestine.

Although knowledge of the mechanism of fat absorption is still incomplete, Dr. Renner said, a good deal of information has accumulated over

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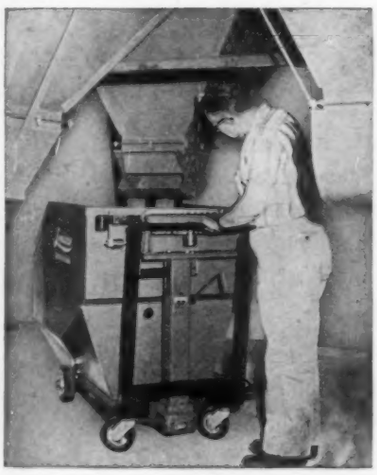

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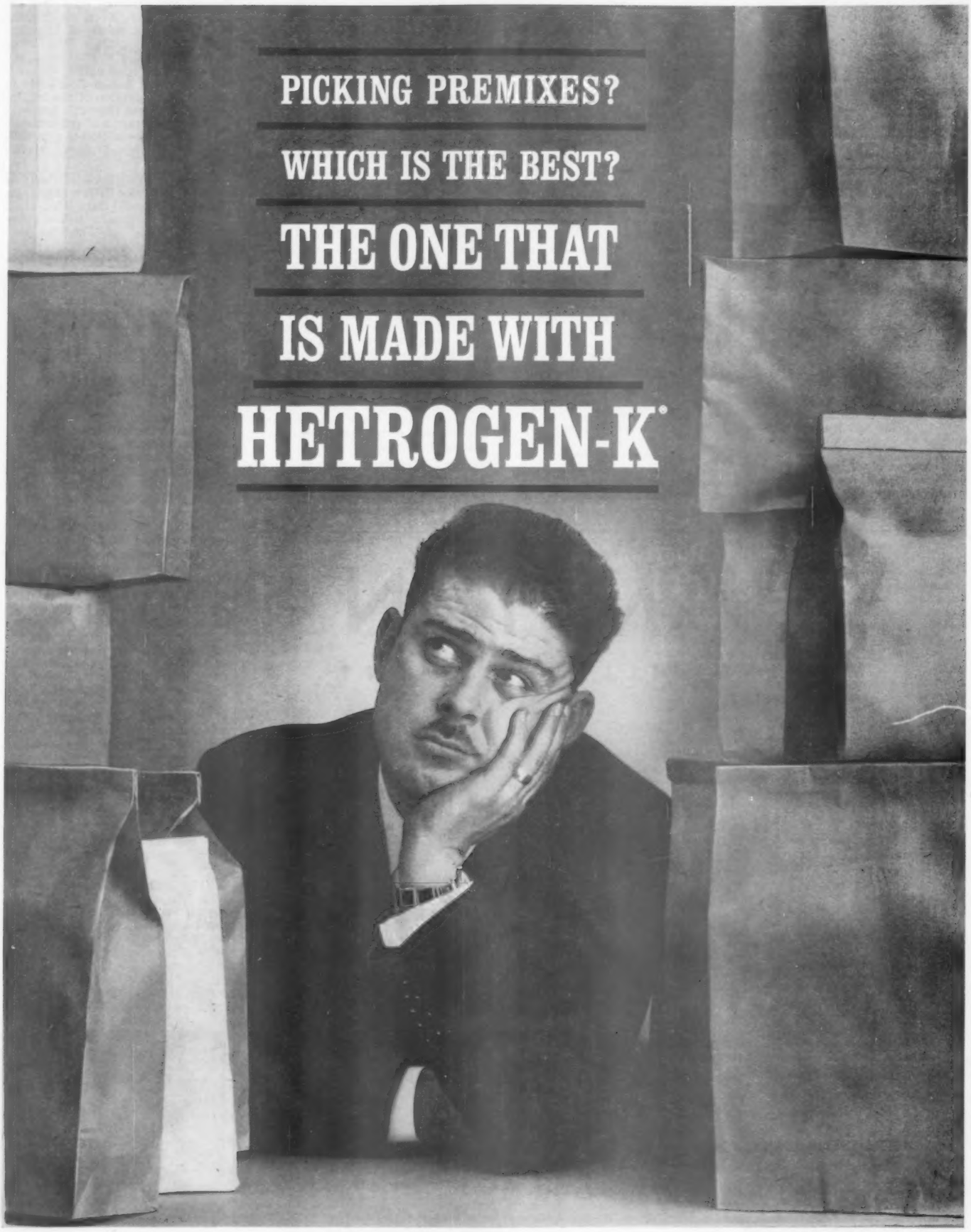

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HETEROCHEMICAL CORPORATION

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the years on absorbability of various fats by the human, rat and more recently for the chick. Typical values for the four-week-old chick are summarized in Table 2.

TABLE 2. Absorbability of Fats by the Chick

	Iodine No.	Absorbability %
Corn oil	122	93
Degummed soybean oil	133	97
Lard	65	93
Hydrogenated fat	69	80
Feed grade tallow	52	70
Beef tallow	44	67
Hydrolyzed fat	61	78
Menhaden oil	169	88
Red fish oil	120	83
Cod liver oil	155	88
Triolein	87	94
Tripalmitin	..	11

The results show, she said, that corn oil, soybean oil and lard were well utilized, while the fish oils, a sample of hydrogenated fat and hydrolyzed fat (a feed grade fat composed of approximately equal parts of fatty acids and neutral fat from animal and vegetable sources) were of intermediate value. Lower utilization is typical of tallow; however, recently Sibbald has reported that utilization of tallow by the chick can be increased by feeding in mixtures with undegummed soybean oil. Calculations from his studies indicate that the absorbability of tallow was increased from 74 to 89% by feeding in a mixture with equal parts of undegummed soybean oil. This finding indicates that the absorbability of a fat mixture may be better than the expected value of its parts.

At the present time, Dr. Renner said, it is difficult to explain the similar utilization of lard and corn oil by the chick, the large differences in utilization of lard and tallow and lard and hydrogenated fat or the differences in utilization of vegetable and fish oils. The possibility exists, however, that as knowledge of the mechanism of fat aborption becomes more complete, these differences will be explained in terms of fatty acid composition and glyceride structure.

THE ROLE OF LIPIDS IN HUMAN NUTRITION—Dr. Roslyn B. Alfin-Slater of the University of California at Los Angeles discounted some of the ideas held by many on cholesterol and atherosclerosis.

Since cholesterol is one of the substances found in the atherosclerotic lesion, it has been theorized that atheroma are caused by abnormal deposition of cholesterol in the arterial wall. Cholesterol is accompanied by other lipid material as well as by proteins and minerals. The deposition of cholesterol may result from its precipitation from a hypercholesterolemic blood as has been claimed by many investigators, but it may also be an attempt of the body to repair an arterial wall injured by biochemical or mechanical agents or by the pressure of blood flow. On the other hand, atheromatous deposits may be a result of a deranged metabolism due to dietary or hormonal excess or deficiencies.

Dr. Alfin-Slater told how the "hypocholesterolemia" theory has had considerable support, mentioning that atherosclerosis has been induced in chicks and some other animals on fat and cholesterol diets. Epidemiological studies suggest that diet may be important in the development of atherosclerosis and its subsequent complications. Many geographical surveys have shown correlations between proportion of fat in the diet and concentration of cholesterol in the plasma of humans. However, said Dr. Alfin-Slater, these surveys fail to account for many cultural and physiological variables, and there are many discrepancies in the correlations which have been made. Then, too, there is a condition called idopathic, familial hypercholesterolemia where high cholesterol levels occur in all members of a family with no tendencies toward coronary disease.

Dr. Alfin-Slater went on to say that it is now generally agreed that dietary fats can influence serum cholesterol levels in humans. It was first claimed that different effects on serum cholesterol levels in animal studies were a result of ingestion of animal or vegetable fats. Later controlled studies showed that the differences were not animal vs. vegetable but were due to differences in fatty acid composition of the fat. Ingestion of various vegetable fats with a high concentration of polyunsaturated fatty acids can lead to a marked decrease in level of plasma cholesterol.

Similarly, cholesterol level can be raised by ingestion of fats containing the more saturated fatty acids. However, the relationship between elevated cholesterol levels and the genesis of atherosclerosis is by no means well established, especially since there is no evidence that reducing serum cholesterol levels results in regression of atherosclerosis or prevention of coronary incidents.

Hess & Clark Holds Marketing Institute

COLUMBUS, OHIO—To give management an opportunity to review and discuss marketing plans with its entire sales force, Hess & Clark, division of Richardson-Merrell, Inc., and manufacturer of medications and animal health products, conducted its National Marketing Institute here recently.

Nearly 75 Hess & Clark district managers, feed medication and animal health specialists and territorial salesmen from throughout the U.S. attended the sessions. Welcoming the group were Dr. A. L. Andrews, president, and Russell H. Eshelman, vice president, marketing.

Dr. W. Arthur Cullman and Dr. William R. Davidson, members of the business organization department at Ohio State University, advised the members of the institute on latest sales methods. This phase of the program was under the direction of Fred W. Davis, sales training manager, and Richard S. Budd, sales operations manager.

Half-day sessions were devoted to description of merchandising, promotion and advertising plans by members of the feed medications and animal health divisions. Those attending the institute also toured Hess & Clark's research facilities at Ashland, Ohio.

B. L. Earhart, manager, feed products division; Jack James, advertising manager, and Keith Ballantyne, assistant feed products manager, pointed out to the salesmen that most sales are made "after you've gone" . . . after the sales call has been completed. This was done through a system of visual aids and sound devices, using vaudeville techniques.

AFTER YOU'VE GONE—That was the vaudeville theme created by members of Hess & Clark's feed products division to dramatize marketing points during the National Marketing Institute held by the firm in Columbus, Ohio. Participants in the program included those shown above. They are, left to right: B. L. Earhart, feed products manager; Sue Skeens, model; Keith Ballantyne, assistant feed products manager, and Jack James, advertising manager.

CHAMPION

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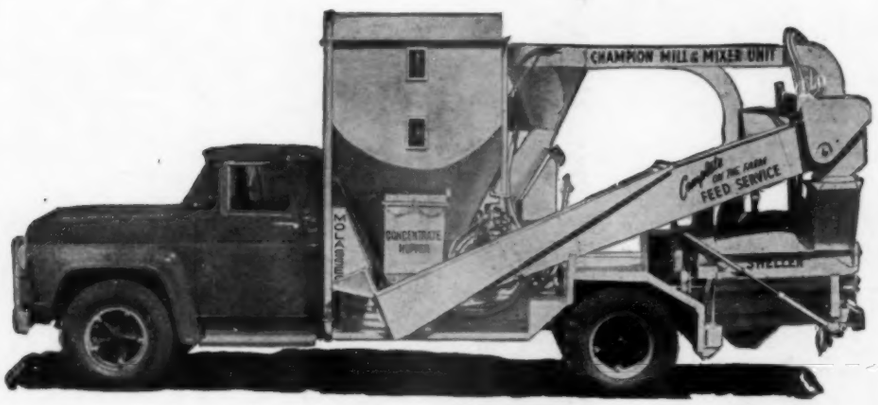

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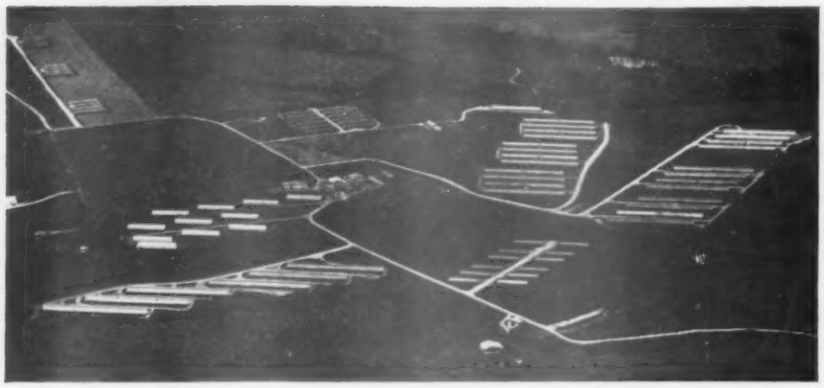

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More important today than ever before is the bred-in superior performance available in the Vantress Dominant White Male Line. Vantress Cross meat chickens live better, grow faster, use less feed per pound of meat produced and give higher eviscerated yield.

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SALES TRAINING AND RECRUITING—In the first picture, left to right, are Ray Underwood, assistant director of sales training for Walnut Grove; John A. R. Hansen, sales supervisor; Charles A. Swisher, assistant general sales manager and director of sales training, and Warren Gaer, director of sales personnel. Mr. Swisher is showing the others the company's central training school notebook. The central training school for new salesmen is one of principal parts of the over-all sales training program. The second picture was taken during a session at the central training school. At the front of the room are Mr. Swisher (left) and Eldo H. Meyer, general sales manager.

Sales Training . . . Advertising . . . Credit . . . Production . . . Distribution . . . Research . . . Quality Control

Here Are Details on How One of the Fastest Growing Firms In the Industry Carries Out These Operations

By Roger Berglund
Feedstuffs Managing Editor

Effective direction and performance are required in several phases of any feed manufacturing business. In addition to over-all organization and management and sales, this includes such things as recruiting and training sales personnel, sales promotion, credit, manufacturing, distribution, research and quality control.

How are these phases of a feed business carried out by Walnut Grove Products Co., Inc., a midwestern feed company whose business increased twenty-fold in the decade from 1950 to 1960 and this year is showing another substantial gain?

The company's management and division directors have spelled out some of the details of these various operations as carried out in their firm.

Walnut Grove, headquartered at Atlantic, Iowa, is a six-plant company serving a major part of the Corn Belt livestock area. The firm sells and distributes feeds through salesmen and warehouses in Iowa and parts of the surrounding states.

(An article appearing in the Nov. 4 issue of Feedstuffs told of company development and organization, products and sales operations. This article goes into other phases of the firm's business.)

SALES PERSONNEL AND TRAINING—Recruitment and training of sales personnel receive special emphasis at Walnut Grove. "This is a training-conscious company," said Charles Swisher, assistant general sales manager and director of sales training.

EDITOR'S NOTE: *This is the second of two articles outlining some of the details of the operations of Walnut Grove Products Co., Inc., Atlantic, Iowa, one of the fastest growing firms in the feed industry. The first article dealt with over-all organization and operation of the company, including products and sales. The accompanying article covers such things as sales recruiting and training, sales promotion and advertising, credit and financial planning help for feeders, manufacturing, distribution, research and quality control—plus diversification moves which the company has made.*

There is a new central training school for new salesmen, but follow-up and continuing field sales training are handled by division managers.

In hiring salesmen, the company looks for some experience with livestock and a strong farm background. Many more college graduates are now employed than in former years. Incidentally, as new salesmen are added, the sales organization generally is getting younger.

About half of the new people currently are college men, and more interest is being stimulated among college men.

It is interesting to note that Walnut Grove feels that past feed experience is not necessarily good. Mr. Swisher said that men with previous experience frequently have to be retrained or given new training. The company would rather take a man and train him in attitudes, habits of work and knowledge and help him gain selling experience.

E. A. Kelloway, chairman of the board, who gave J. J. O'Connor, president, much of the credit for basic development of the sales force in recent years, said what the company looks for in prospective salesmen are right attitudes and potential and prefers men not previously trained. He stressed the "right attitude and ability." With that, men can be trained "our way" and can grow, he said.

During the last two years, 85% of the new salesmen have had no previous feed experience and 50% have had no previous sales experience.

Mr. O'Connor observed that the company has recognized that the type of person the firm does business with is changing, and the sales force has been upgraded to meet the changes. "What was good enough before is not good enough now," he said.

Beginning in 1951, a gradual change was made from part-time to full-time salesmen, and the entire sales force now is made up of full-time sales/service representatives.

The central training school is a two-week program in Atlantic, with training in the field following. The over-all program also includes training for division managers.

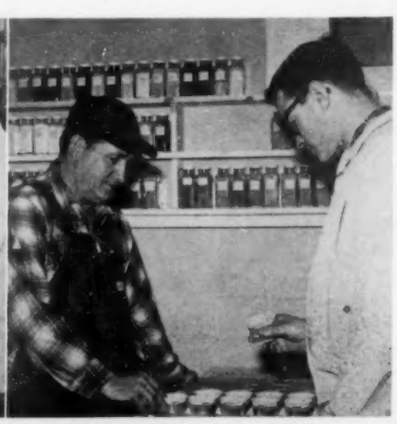
CREDIT DEPARTMENT—F. J. (Ted) Becker (left), Walnut Grove credit manager, and Karl Aldag, assistant credit manager, review one of the Walnut Grove "Producer's Planning Guides." A complete financial planning service is offered to the livestock feeder.

In the central training school, Mr. Swisher said, one objective is to obtain uniformity in salesmen's methods and information. All new salesmen get two weeks of very comprehensive indoctrination and orientation.

"We can't train men 'how to do it' here," said Mr. Swisher, "but we can acquaint them with their jobs, with the company and its facilities and operations. We can give an accurate understanding of the job and its purposes, in line with company goals. The man gets insight into all phases of his job."

The central school uses a staff of 14 persons as instructors. These are department heads and specialists. All top people in the company are involved in the training.

The initial central training is followed by training in the field on a



PRODUCTION AND QUALITY CONTROL—The first photo, shown in front of the Walnut Grove office building, are key men in production and quality control. Left to right are Duane Cumpston, director of production planning; Thomas J. Hoover, director of manufacturing and transportation, and J. G. Pierce, director of quality control. The second photo shows the quality control laboratory in Atlantic. Mr. Pierce (in business suit) is in the center of the photo. In addition to the central quality control laboratory, each plant has an in-plant quality control system, as illustrated in the third picture. Jess Turner (left), foreman of Plant No. 1, and Don Postlewaite, plant manager, inspect samples of finished product. Behind them are samples of raw ingredients and finished products.

RESEARCH FARM—This is Walnut Grove's 240-acre research farm, used to carry on controlled experiments and applied or farm level tests. The research farm has facilities for swine, beef cattle and dairy calves, plus battery facilities for poultry. Field tests also are run by the research division. The research farm annually is shown to some 5,000 visitors, according to company officials.

continuous basis under the direct supervision of division managers. The sales training department and sales management constantly evaluate the training program. Part of the field training is monthly division meetings of salesmen, with kits and information provided from the home office. This part of the over-all program assures that all salesmen are doing the same thing, the same way at the same time, telling the same story of feeding developments and programs.

Quarterly sales meetings also are held on a regional basis in the field, with home office personnel going out to these meetings.

To facilitate the whole training program, division and regional managers are "trained" in training methods and procedures.

One aim is to help all sales people become qualified for management positions if they have the desire and capability.

There are several weeks of management training for division managers. Then they are "managers in training" for a year before being given full status as managers.

ADVERTISING AND SALES PROMOTION—Jack Bergstrom, who heads the public relations and sales promotion division, pointed out that direct mail is the most important type of advertising in Walnut Grove's program, but radio and farm publications also are key parts of the advertising program.

In connection with advertising, Mr. Bergstrom had an interesting observation on farmers' interests and type of advertising. Many farmers, he feels, are interested in two things —their own business, and sports. In view of sports interest, Walnut Grove has sponsored radio and television coverage of major athletic events, including radio broadcasts of Iowa and Nebraska football. And, says Mr. Bergstrom, a very favorable response has resulted.

Farm magazines serving the firm's area also are used. Incidentally, some of the ads are of the soft-sell type. For example, some ads have been used to advise farmers to call on their veterinarians in cases of livestock health problems. This has helped sell feed indirectly and also has been part of the firm's over-all program of fostering good relationships with veterinarians.

In the way of direct mail, there are special mailings on new feeding programs or new research information, but the main part of the direct mail program is a monthly 4- to 8-page publication, called Feedlot News, which is prepared by the Walnut Grove communications and other people. Salesmen are responsible for maintaining the mailing list, which currently includes the names of about 72,000 farmers.

The publication consists mostly of management and feeding advice and is an "indirect sell" piece. Special departments include a livestock nutrition column, a veterinary column, a poultry column and an economics column by an Iowa State University economist. Emphasized a great deal, too, is something which showed up in a survey to be of most interest—this is illustrated success stories on individual farmers.

The whole advertising program is carried on consistently in the firm's trade area. As soon as a new sales area is opened up, advertising starts in that area.

COMMUNICATIONS—The company puts a great deal of emphasis on communications within the company, particularly communication with sales personnel. In fact, there is a director of sales communciation who works with sales executives and the sales promotion and public relations department. This latter department in turn aids in preparation of materials.

Sales presentation aids, pamphlets, brochures and other tools to help in sales are prepared by these people. One aim is to help make all sales messages more understandable and useful. All material is coordinated by the communications specialists. In

RESEARCH AND VETERINARY RESEARCH TEAMS—Dr. Damon V. Catron (right), vice president in charge of research and development, points out a part of Walnut Grove's new life-cycle swine feeding program to other members of the research department. Left to right are Dr. John D. Shoeman, director, veterinary research; Dr. James Bailey, associate director, veterinary research; LeRoy Nelson, director of research, and Robert E. Anderson, director of nutrition.

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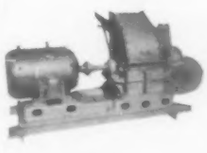

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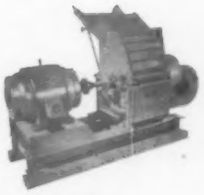

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A COMPLETE LINE OF FEED MILL MACHINERY

TRANSPORTATION—Walnut Grove transportation operations are closely coordinated with feed production and warehousing and distribution, as explained in the accompanying article. In the first photo are some of the farm delivery trucks in front of the plant at West Liberty, Iowa. Included in the picture is a bulk truck. Most of the feed is distributed in bags. The second photo shows one of the semi-trailer trucks used in moving feed from plants to warehouse depots.

addition to external mailings, interal publications are prepared. These include "Who's Who," which goes to sales people, and "Wal-Gro News," which goes to salaried personnel.

FINANCIAL PLANNING AND CREDIT—The credit division is responsible for not just credit in the conventional sense but for a complete financial planning service for the livestock feeder. This service makes it possible for the livestock producer to foresee and plan both income and outgo.

One result of the program has been less extension of feed credit than otherwise would be the case. Also, with a complete feeding and financial program set up, the salesman may have to make just one sale for a given period and then spend most of his time on service, helping the producer to get a better return from his feed expenditures.

The financial planning and credit service is carried out by local sales/service representatives, with help and direction from the home office.

F. J. Becker, director of the credit division, explained the service, pointing out that each feeding operation is an individual operation, with the company tailor-making credit programs for individuals.

The basic feature of the system is a "Producer's Planning Guide and Feeder Agreement," a form which is filled out by the salesman and the feeder. This can cover any given period, from four months to two years. It shows such things as amounts and values of property, including livestock and feed supplies; income from all sources, including sales of livestock, with prices conservatively estimated; all debts, even including payments on Mom's automatic washer; feed requirements and costs under prescribed feeding programs; and net worth. In other words, income is anticipated, and outgo is coordinated with the income, helping the producer to meet all of his payments, including feed purchases. If feed credit is needed, a feeder agreement is worked out with terms of settlement coinciding with the over-all plan.

If credit is provided, the feeder pays interest of ½% per month. He agrees to certain things, such as use of Walnut Grove supplements, to contact the company if there is any disease or management problem, to vaccinate pigs for cholera, etc.

Mr. Becker said that complete scheduling of income and outgo frequently means that feed credit is not needed at all. Also, many times loans can be shifted to banks. Frequently, too, a post-dated check system can be used in paying for feed; and this is said to have worked out very well.

Along with the planning guide, there is a cash flow chart which shows cash and income and outgo for each month.

The whole procedure, said Mr. Becker, helps assure that the producer will feed the right thing at the right time and get better results. A farmer who has skimped on feed does better after he goes on the program. Also, the system eliminates feed shopping and financing where the financial status is not known.

The program, Mr. Becker noted, appeals to progressive feeders who want to look ahead, to do better. And, of great importance, it helps salesmen be more productive.

In addition to the over-all planning guide, the company has a "Blueprint for Beef" form which spells out an individual's feeding program for cattle and a "Life-Cycle" program for hogs and a "Life-Cycle" feeding program for dairy.

MANUFACTURING AND DISTRIBUTION—The manufacturing and distribution system is described as one which is "internally integrated," with everything centrally controlled, from purchase of ingredients to delivery of feed to individual farms.

All products are made in six plants owned by the firm and are distributed through 48 warehouses and depots, owned or leased by the company. All transportation and delivery, including delivery to the farm, are carried out with trucks owned or leased by Walnut Grove.

The distribution system, new to the feed industry when its was started, has contributed significantly to the growth of the company, said Mr. Kelloway.

While bulk feed has been emphasized in recent years, this company notes that by far most of its feeds go out in bags. In this connection, the use of supplements as compared with complete feeds is pointed out.

The manufactured feeds move from plants to the network of field warehouses covering the firm's sales territory. Every customer is said to be within a relatively few miles of a warehouse. The feeder may have his feed delivered directly to his farm or pick it up at a warehouse. The system, it was said, always assures fresh, palatable feeds.

Originally, mineral salesmen handled their own supplies. The present warehouse and distribution system got started in 1951.

Walnut Grove has two plants in Atlantic and other plants at West Liberty, Independence and Cherokee, Iowa, and Elkhorn, Neb. Premix operations are carried out at an Atlantic plant only, because of the necessity of "rigid and specific control over preparation of the micro-ingredients," because the firm's laboratory is in Atlantic and because of the special techniques and equipment involved. Similarly, because of special techniques and equipment, all mineral feeds are made at one plant, at Independence.

All of the feed plants are batch mixing operations, and the average capacity is 100 tons per eight-hour shift.

Tom Hoover, director of manufacturing and distribution, said that a key to the whole system is a special production planning department, which consists of four persons, headed by specialist Duane Cumpston, director of the department. These people are responsible for the purchasing of all ingredients as well as scheduling and coordinating all production.

The system followed sounds complex, but, actually, said Mr. Hoover, it has put production and transportation operations on a routine basis and eliminated the need for constant

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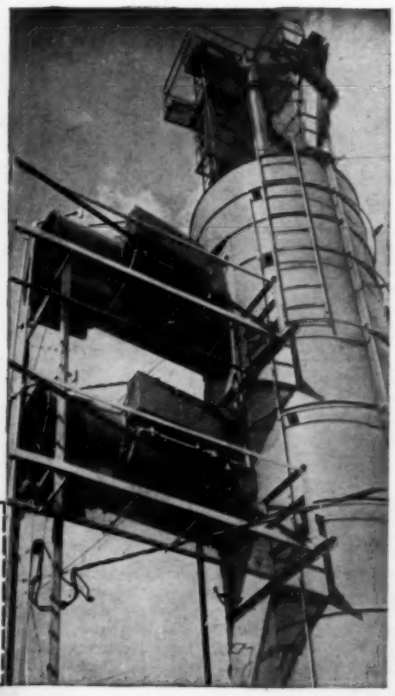
ACE High Dryers are available in 9 sizes ranging in drying rate from 250 bu. to 1000 bu. per hour. ACE High makes this guarantee: Any model of the ACE High Continuous Flow Grain Dryer will remove from clean unfrozen cereal grains or oil seeds, 5% moisture at the rate per hour specified for each model, provided, final dried moisture is not reduced below 12½% wet basis.

If you have need of an efficient continuous flow dryer at a price which will fit your pocketbook, it will pay you to look into the ACE High line. Just fill out the coupon and mail to Dept. 11-AL-7-2, ACE Supply & Equipment Co., P. O. Box 540, Salina, Kansas.

• *Mr. Elevator Operator: The manufacturers of ACE High Continuous Flow Grain Dryers have a full line of farm bin aeration systems, which have attractive dealer discounts. Why not provide your customers with aeration equipment at a price they can afford—at a price you can sell profitably. Please check request for aeration equipment on the enclosed coupon.*



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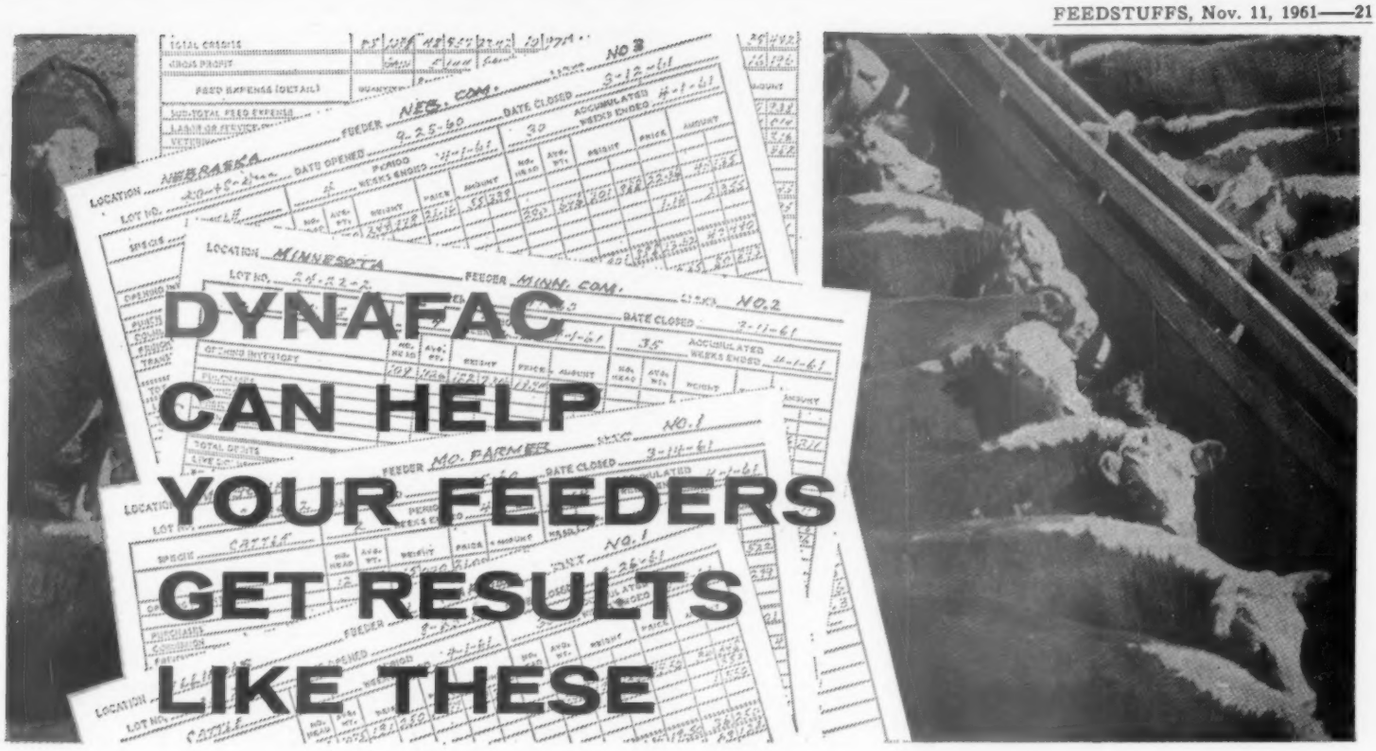

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DAILY GAIN (lb./head)		2.71	2.83	3.28	2.96	1.84
DAILY FEED INTAKE (lb./head)		25.6	29.6	27.9	25.6	37.1
NO. OF FEEDLOTS		3	9	2	7	3
NO. OF HEAD		1,223	2,255	466	2,005	848
TYPE OF RATION	(primary)	Corn	Corn	Corn	Corn	Corn Silage
	(secondary)	Alfalfa-Molasses	Corn Silage	Hay	Molasses	Corn

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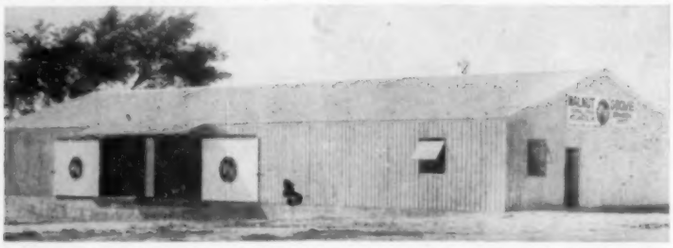

WAREHOUSE DISTRIBUTION POINT—Walnut Grove feeds are distributed to farmers through a network of warehouses and depots. The above picture shows a typical warehouse depot, at Denison, Iowa.

hurry-up decisions to solve this problem or that. It has taken decisions out, instead of putting them in.

The production planner, working with plant managers in the field, also coordinates ingredient purchasing, which is done centrally. Production planning and buying are under the executive vice president, M. D. Livengood, and there actually is no separate purchasing department.

Production planning starts with farmers' feed orders as a basis. The IBM system used for processing orders reduces business figures to averages which are used in planning production in advance. The feed depots or warehouses don't order feed; it is sent to them, based on sales and deliveries and projected needs for given periods. Feed arriving at a depot today has been planned two weeks previously.

All manufacturing in all plants is scheduled in the Atlantic office.

The production planning department every Friday gives each plant its production schedule for the following week. The plant manager at the same time is checking on ingredient supplies on hand and coming, and this information plus projections of needs is used in purchasing in Atlantic.

Figures on plant and warehouse inventories and production are used to determine loads of feed that will be hauled the following week. Each Saturday, a central dispatcher gets information on all loads to be hauled by semi's from plants to warehouses the following week. The dispatcher matches loads and sets up schedules so that all drivers and all tractors are busy all the time. There are spare trailers so that a driver can return to a plant and immediately go out with another load. The whole system, said Mr. Hoover, has become an efficient routine.

Each depot manager weekly receives a sheet telling what feed will arrive at his depot the following week. If it appears to him that supplies of some feeds may run short, the additional supplies will be sent out the week after that. In each warehouse, there always is not less than a week's supply and not more than a three weeks' supply. As a rule, sales and deliveries in a given week could be double what was anticipated, and the correction in supply could be made the following week. If there were a true emergency, loads would be modified, but only minor modifications ever are necessary, said Mr. Hoover.

With the system used, not only is efficiency improved, but fresh feeds always are assured, Mr. Hoover emphasized.

Use of the IBM figures, he explained, results in a self-correcting system which involves looking at two or three weeks at a time and using averages. An estimate of usage for a given period could be 100% wrong, but the warehouse still would not run out.

All feed salesmen have regular delivery days, with their farm customers receiving previously ordered feed on certain days. This makes delivery from the warehouses more efficient, with trucks going out in certain directions on given days.

The system also is set up in anticipation of some walk-in business where farmers pick up feed at the warehouses.

Mr. Hoover says that the "internally integrated" system has these advantages: (1) Production efficiency is greater, with fewer changeovers, and there is less chance of contamination. (2) There is product control all the way from plant to the farmer, and this brings efficiency in handling and preserves the condition of the feed all the way through. (3) Fresh feed is assured. (4) Feed is delivered to the farm, to the right place, in good condition. (5) Everyone, from salesman to warehouseman to local truck driver, is telling the same story at the same time and following company policies on sales and deliveries.

The depot manager is an important link in the system, Mr. Hoover pointed out. The manager is a combination salesman, dispatcher, warehouseman and management representative, coordinating all functions locally.

SAFETY AWARDS—Each year, Walnut Grove holds an awards program for semi and farm delivery drivers, at which time awards are provided for years of driving without accidents. In the above photo, Lt. John Mahnke, Iowa highway patrol, featured speaker, congratulates Leonard Thomsen (extreme right) and Merle Warner, Beemer, Neb. On the left is Tom Hoover, director of manufacturing and transportation. Truck drivers are employed with the idea that they may be promoted to become depot managers. Mr. Thomsen recently was named depot manager at Plainview, Neb.

Each truck driver going to farms is described as a "professional," an intelligent, neat, uniformed, well trained company representative. These drivers are hired with the idea that they will be future depot managers as the company expands, said Mr. Hoover.

The company now has two master depots and 46 other depots, all owned or leased by the company. Transportation equipment includes 17 truck tractors, 36 trailers and 47 van trucks, plus additional leased equipment.

RESEARCH—Research is described by the company's executives as one of the keys to the firm's past and prospective growth. In fact, they note that the company's greatest growth—the decade from 1950 to 1960, when sales increased 20-fold—coincides with the establishment and development of Walnut Grove Research Farms.

Now heading the research division is Dr. Damon Catron, who became vice president in charge of research and development in 1959 after gaining world recognition as a swine nutritionist at Iowa State University. The firm's 240-acre research farm, located near Atlantic, was established in 1951 and has been used to carry on controlled experiments and applied on farm level tests. In addition, the firm runs field tests on various farms. Le Roy Nelson, director of research, said that the company likes to follow each new product or program through these three steps.

The research farm has facilities for swine, beef cattle and dairy calves, plus battery facilities for poultry. Some 1,000 hogs and 1,200 to 1,500 head of cattle are run through the company's own farm each year in connection with work on ingredients, formulation, feeding programs and management methods.

In line with product emphasis, most work has been on swine and beef cattle, but more dairy research, including field work, is now being done as the company expands in dairy areas.

A sales spokesman said that a good deal of the firm's growth can be attributed to prompt and early testing of new developments which later are applied to feeds. During the 1950's, he said, the company was among the first to offer antibiotics for livestock, pioneered use of stilbestrol in cattle rations and led in introduction of enzymes as an aid in stimulating growth of young animals. At the same time, he observed, early testing has meant not using some ingredients or methods claimed to be new.

In addition to work on formulation and product development, research personnel are active in the field and in providing information for sales/service men.

The company also has a veterinary research department, which actually is part of the sales division. Two veterinarians and their assistants work with the research technicians, inform and help salesmen on service, and carry on liaison work with veterinarians.

The entire company, said one executive, is "research oriented."

The net cost of the research program during fiscal 1960 was approximately ½% of the total sales.

QUALITY CONTROL—A special quality control division was set up by the company's new management

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Bill Myrick, owner of Myrick Equipment Company, Mt. Pulaski, Illinois, prepares an SF-8 Bulk Feed Body for delivery.

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at the same time that a major research program was undertaken. The basic policy in quality control, said James G. Pierce, director, is to "prevent poor quality from being manufactured rather than to catch a substandard product later." The department guides operations of all departments where quality is involved. To do this, there are direct connections with persons in all divisions of the company.

The heart of the quality control setup is a completely equipped laboratory in Atlantic which is staffed by a chief chemist and four other persons. Ingredient and feed samples from all plants go to this lab for analysis.

In addition, each feed plant has an in-plant quality control setup and a quality control room. A production man, such as an assistant plant manager, is designated in each mill to be responsible for this. He will do such things as sampling; make physical inspections; check screen size, moisture, etc.; grade grain, and make certain analyses. All of this is coordinated with purchasing.

Another special feature of the program is plant inspections, on which the quality control and production departments work together. Mr. Pierce himself makes periodic visits to the plants to check quality control activities and check on operating conditions.

Mr. Pierce noted that his department works closely with the purchasing and research departments on ingredient use and specifications. In fact, the company has developed its own ingredient buying guides. "There's no compromising on ingredient quality," said Mr. Pierce.

His office is a source of information for others in the company on ingredients and potential ingredients.

Still another function of quality control at Walnut Grove is in product development—where the department functions as a step between research and production. Research may design a formula; then quality control lays out a formula for each plant, adapted to such things as batch size, order of introducing ingredients into a batch, ingredient availability, cost, etc. The department also designs premixes for various products. A premix is designed so that there is a unit package for each batch.

Mr. Pierce observed that quality control in his firm reaches "from the design of a formula to the way feed is put on a man's farm. It can touch all areas of operation."

Labeling and registration and compliance with state and federal regulations are other functions of the department. Still another is certain customer service. The department runs some analyses of forage and grain for customers and helps on some customer service problems.

In connection with the quality control program, one executive noted that Walnut Grove "became the first company in the industry to guarantee the levels of nutrients in its products, carrying these guarantees on the feed tag. It is an idea that is still in effect and has brought much prestige."

DIVERSIFICATION — Mr. Kelloway explained that diversification moves were made in 1960 and 1961 in order to strengthen the company's corporate position; to help provide greater job security to employees and investment security to stockholders, and to use management talent and principles developed by Walnut Grove.

Walnut Grove purchased for $5.3 million a controlling interest in Watson Bros. Transportation Co., Omaha, one of the nation's major general commodity carriers. This transportation firm and its subsidiaries now represent a complete transportation company, including air cargo and sea operations as well as trucking. From a loss situation in 1960, Watson operations were improved so that a profit has resulted this year. Mr. Kelloway, John Bunce, Mr. Livengood and Mr. O'Connor all are active in Watson management; in fact, Mr. Kelloway, who is president of Watson, and Mr. Bunce, executive vice president, now spend most of their time with the transportation firm. Mr. Kelloway said it was felt that Watson was part of an industry basic to the economy and that it represented a sound investment for Walnut Grove and an opportunity for growth.

Acquisition of Watson and its subsidiaries did not constitute a merger or consolidation. Walnut Grove and Watson operate independently of each other, and the Watson purchase is considered by Walnut Grove as an investment.

Walnut Grove also now owns Kurda

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Mills, Inc., a grain processing operation which operates five plants in North and South Dakota. These operations supply some ingredients to Walnut Grove and also merchandise grain and process grain products for the trade.

Walnut Grove owns part of Welkona Turkeys, Inc., headquartered at Wellman, Iowa. This is a turkey hatching, brooding, raising and feed milling operation with hatcheries at Kalona and Indianola, Iowa, and feed mills at Wellman and Wayland, Iowa. This firm hatches some 800,000 poults a year. It raises some turkeys and also sells poults and feed to growers, providing financing. The breeder flocks and hatcheries are all company-owned. The West Liberty plant of Walnut Grove supplies supplements for the turkey feeds. Louis Belcher is president and general manager of Welkona Turkeys.

Most recently, Walnut Grove acquired 80% of the outstanding stock of Whitney Loan & Trust Co., a bank in Atlantic.

Walnut Grove and Watson sold an insurance firm which had been owned by these two companies to Standard Oil of Indiana. The two former owners sold the company, Imperial Casualty and Indemnity Co., for more than $2 million.

Management, Feed Milling Subjects Set for School

SEATTLE — A program featuring both management and feed milling subjects is planned for the eighth annual Pacific Northwest Feed Mill Production School Feb. 14-15 at the Hotel Benjamin Franklin, Seattle. The school is sponsored by the Washington State Feed Assn., Inc.

School subjects and speakers are:

"Grinding and Mixing Cost," "Accounting Systems for Actual Production Costs," "Inventory Controls," and "Plant Layout"—D. E. Roddis, Roddis Feed Co., Rochester, Minn.

"Efficient Use of Manpower, Mills and Rolling Stock" and "Record Keeping and Return on Investment" —R. R. McEllhiney, production manager, feed division, Albers Milling Co., Los Angeles; "Labor Costs for Pelleting," by a representative of the California Pellet Mill Co.; "Does Pneumatic Conveying Break Up the Material Being Conveyed?" by R. G. Dye, general manager, Conveyair, Ltd., North Vancouver, B.C., Canada; "Batch Mixer Design Affecting Inter Batch Contamination" by George Bailey, Forrest D. Larson & Assoc., Vancouver, Wash., and "Trucks, Tires and Mill Maintenance" by Smith Snyder, maintenance supervisor, Western Farmers Assn.

There will be five workshop sessions and short talks on certain items of equipment and other subjects.

Report Results of Lamb Feeding Trials

COLLEGE STATION, TEXAS — Results of lamb feeding trials at the Sonora substation of Texas A&M College have been reported by Fred R. Campbell, W. T. Hardy, D.V.M., and J. H. Jones.

Tests with 70 Rambouillet wether and 30 ewe lambs, divided into five groups and fed different rations, were made in a 95-day feeding trial Nov. 7, 1960, to Feb. 10, 1961.

It was found, according to the researchers, that a pelleted ration, 70% alfalfa hay and 30% oats, produced slightly more gain than a pelleted ration of 50% alfalfa and 50% oats. A loose ration of 70% chopped alfalfa hay and 30% whole oats was found unsatisfactory for fattening.

Lambs self-fed choped hegari stover separately from a mixture of 15% cottonseed meal and 85% ground sorghum grain, also self-fed, made poor gain. The substitution of 15% alfalfa meal for 15% of the sorghum grain with the same method of feeding resulted in satisfactory fattening gain.

Lambs allowed a salt mixture containing 600 mg. of Aureomycin per pound outgained lambs allowed 0.03 lb. plain salt daily. Wether and ewe lambs had respective feedlot daily gains of 0.4 and 0.35 lb.

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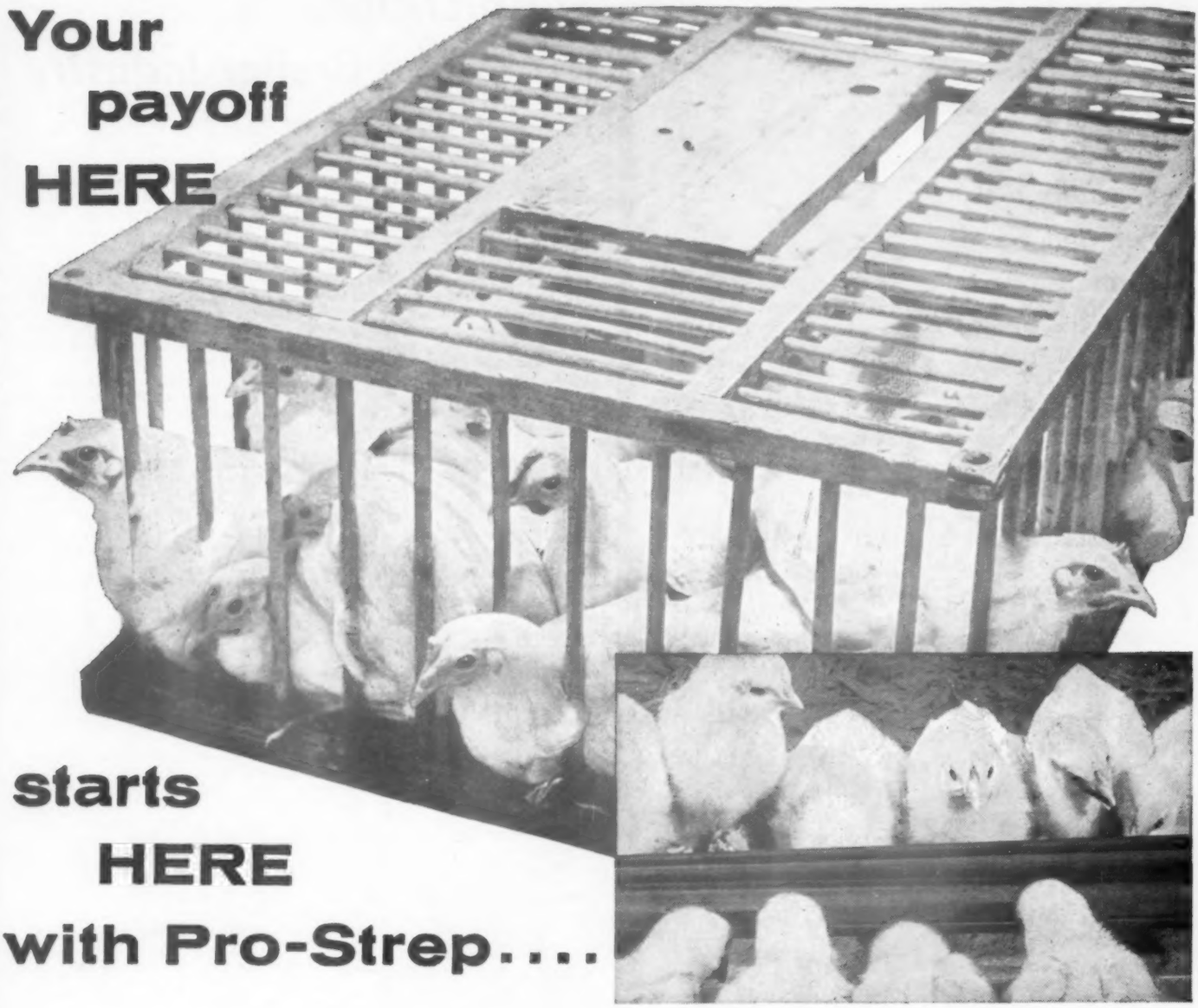

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STABILIZING The Broiler Industry

By Richard D. Darley and Dr. Paul L. Farris
Purdue University

Increasing concern is being expressed about over-expansion of the broiler industry. Broiler prices, U.S. mid-month average at the local market (or farm) level, dropped from 17.6¢ lb. in February, 1961, to around 12-13¢ in midsummer. Questions have been raised whether such low prices cover production costs.

If the industry should desire to stabilize production at prices which cover production costs, or alter broiler marketings and prices in some manner, seasonal (within the year) and year-to-year measures of demand and cost of production would be needed.

ALTERNATIVES — Demand and cost of production information can be used by individuals and groups to increase the industry's stability.

Individual action — Estimates of future market prices and information on how to figure production costs could be disseminated to individual members of the industry. The individual could then adjust his own production as he saw best.

Group action — Available supply and demand information could be used to determine the quantity of broilers needed to maintain a certain price level and a given price pattern within a year. Quantities that various individuals within the industry would produce would need to be determined. A device for stabilizing the industry through group action might be a marketing order.

Members of the broiler industry and other agencies, both public and private, may wish to consider alternative methods of stabilizing extreme fluctuations in broiler production and broiler prices. This article presents some demand estimates of the kind required in whatever method may be employed.

SEASONAL VARIATIONS IN DEMAND—Demand in this article is defined as the quantity of broilers that buyers will take at a given price in a given market (the U.S.) at a given time (a certain month). De-

EDITOR'S NOTE: *This article is particularly relevant at a time when there is much being said about government or industry control of broiler production. The authors note that measures and conditions of broiler supply and demand within a given period can be used to bring about more orderly production and marketing and, consequently, more stable broiler prices.*

Mr. Darley, formerly at Purdue, is now on the marketing department staff in the school of business administration at San Diego (Cal.) State College. Dr. Farris is an agricultural economics professor at Purdue University.

Their article is reproduced from the Sept. 30, 1961, issue of "Economic and Marketing Information for Indiana Farmers," prepared by Purdue's agricultural staff.

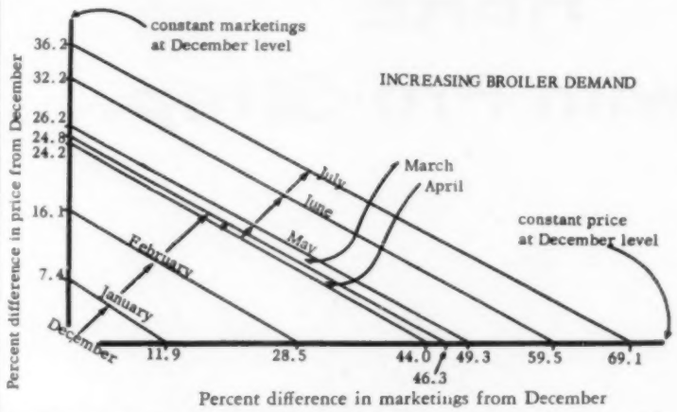

FIGURE 1—This chart of estimated monthly broiler demand, December-July, 1948-60, shows that in July, for example, an estimated 69.1% more broilers could be marketed than in December at the December price. Or, if quantity marketed in July would remain constant at the December level, the price in July would be an estimated 36.2% higher.

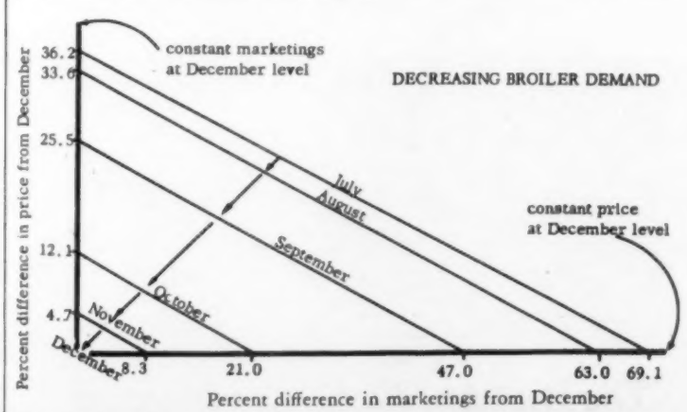

FIGURE 2—This chart of estimated monthly broiler demand, July-December, 1948-60, shows that in August, for example, an estimated 63% more broilers could be marketed than in December at the December price. Or, if quantity marketed in August would remain constant at the December level, the price in August would be an estimated 33.6% higher.

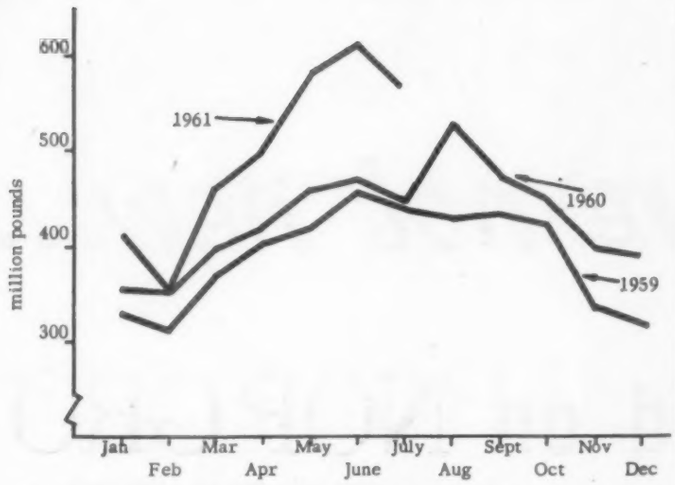

FIGURE 3—Federally inspected slaughter of young chickens, as reported by the U.S. Department of Agriculture in July, 1961, is charted here.

mand increases if buyers will take more at a given price than in a previous month, or if they will pay more for a given quantity than in a previous month. Demand decreases if buyers will take less at a given price, or if they will not pay as much for a given quantity.

A recent Purdue study[1] shows that the low point in the demand for broilers has come in December (see Figure 1). From the first of the year through March, demand increased rapidly. Demand during April has averaged slightly less than during March. From April through July demand rose further, but less rapidly than during the first quarter. From August to December demand decreased with the fastest rate of decline coming during October (see Figure 2).

If prices had been stabilized (note the horizontal lines in Figures 1 and 2) an estimated 69% more broilers could have been marketed in July, the month of the seasonal peak in broiler demand, than in December, which is the month when demand for broilers tends to be lowest.

If the objective were to market the same amount of broilers each month rather than to stabilize prices (now refer to the vertical lines), broiler prices would have averaged about 36% higher in July than in December.

The smaller range of variation in broiler prices than in broiler marketings is a result of the elastic demand for broilers. In this study, the price elasticity of demand for broilers was estimated to be —1.7. This means that a 1% change in broiler price was associated with a 1.7% opposite change in broiler marketings. For a commodity with elastic demand, gross returns are higher with a low price than with a high price. But this may not be true for net returns.

USE OF MONTHLY DEMAND ESTIMATES — Information on seasonal variations in demand can be used in conjunction with expected marketings to forecast broiler prices. Broiler chick placements usually give a fairly close estimate of marketings two months in advance. Egg settings data indicate expected marketings three months in advance. Hence, fairly accurate price estimates can be made two to three months ahead.

PRODUCTION AND PRICE PATTERNS VARY—An intermediate seasonal price pattern may seem more desirable than the price patterns generated either by a stable price or stable marketings. It is generally believed that the cost of producing broilers is about ½¢ lb. higher in

(Turn to page 30)

[1]"Monthly Price Estimating Models for Broilers," unpublished Ph.D. thesis by Richard D. Darley, Purdue University, August, 1961. The analysis is based on the 1948-60 period and the study was conducted under Purdue A.E.W. project 876.

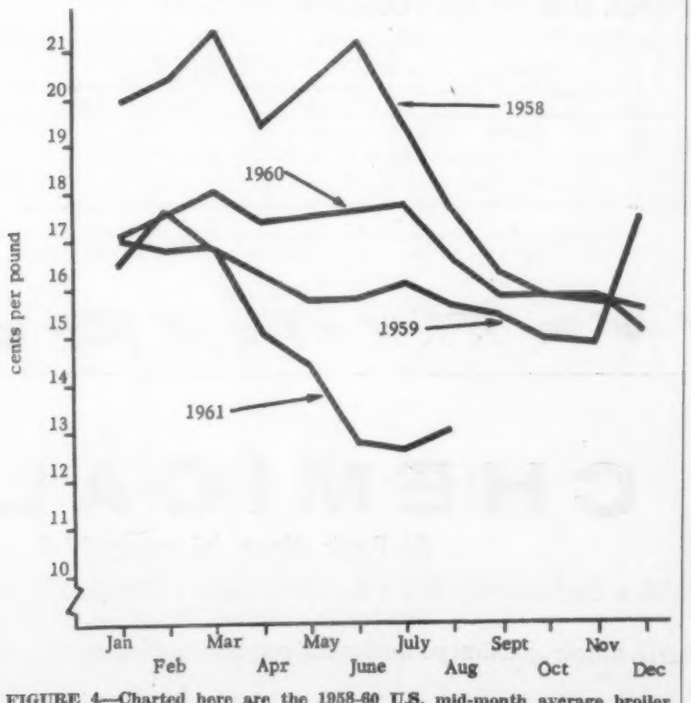

FIGURE 4—Charted here are the 1958-60 U.S. mid-month average broiler prices received by farmers. Data is from U.S. Department of Agriculture information published in July, 1961.

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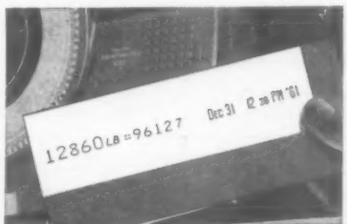

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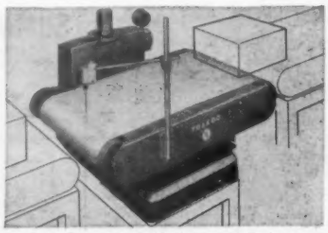

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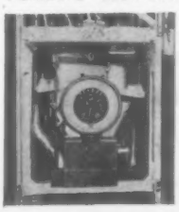

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BASIC FACTS ABOUT A RECENT UNIVERSITY* TRIAL

*Name on request

Number of steers: 24 (6 per lot)

Breed: Black Angus

Length of study: 140 days

Basal Ration: Low-moisture corn and cob meal; good alfalfa hay; plus the following protein and mineral supplement, fed at the rate of 1 lb. per head per day:

	(percent)
50% soybean oil meal	71.0
66% dry molasses product	10.0
Wheat bran	10.0
Dicalcium phosphate	5.0
Ground limestone	2.50
†Diethylstilbestrol premix	1.0
Trace mineral premix	0.25
‡Vitamin A and D_2 premix	0.25

†Supplies 10 mg of diethylstilbestrol daily

‡Supplies 5000 USP units of vitamin A and 1000 of D_2 per pound of supplement

Average protein content of total ration: approx. 10.5%

SUMMARY OF IMPROVED PERFORMANCE DUE TO SUPPLEMENTAL NOPGRO

Lot No.	Level of Nopgro Fed (lb./head/day)	Avg. Daily Gain (lb., 140 days)	Average Feed/Gain Ratio	Increased Response due to Nopgro (%)	
				Gain	Feed/Gain Ratio
I	None	1.90	11.48	—	—
II	.005	2.10	10.69	10.0	6.9
III	.010	2.17	10.68	14.1	7.0
IV	.020	2.04	11.06	7.0	3.6

Note: Although the response due to Nopgro was highly significant, average daily gain and feed conversion in this test were adversely affected by unfavorable weather conditions.

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REMARKS ON RESULTS OF THIS UNIVERSITY EXPERIMENT
—and economic summary

A substantial improvement in average daily gain and efficiency of feed utilization was noted in all three enzyme-supplemented lots as compared with the negative control. Optimum performance was observed at an input rate of .01 lb. of Nopgro per head per day. The dollars-and-cents value of the superior showing made by Lot III is given in the economic summary following.

Economic Summary

The information above reveals an increased profit of $5.04 per head as a result of feeding Nopgro (.01 lb. per head per day). Below are the calculations from which this figure is derived.

(1) Improvement in average daily gain (0.27 lb. per head per day) x number of days on test (140) = 37.8 lb., **increased live weight per animal.**

(2) Increased live weight per animal (37.8 lb.) x arbitrary market value ($25 per cwt)=$9.45, **gross improvement in market value per animal.**

(3) Average daily feed intake for Nopgro cattle (23.21 lb.) less average feed intake for control cattle (21.86 lb.)=1.35 lb. per head per day **extra feed intake for Nopgro-fed animals.**

(4) Increased daily feed intake for Nopgro lot (1.35 lb.) x number of days on test (140)=189 lb., **total increase in feed intake for each animal** receiving supplemental Nopgro.

(5) Total increase in feed intake for Nopgro-fed cattle (189 lb.) x approx. value of composite ration=$4.41, **total extra feed cost per Nopgro-fed animal.**

(6) Gross increase in market value of Nopgro-fed animals ($9.45) less extra feed cost ($4.41) =$5.04, **increased profit per head** due to presence of Nopgro in the ration.

We now have a complete report on the above trial and those of other universities and commercial feedlots. For a round-up of all information on Nopgro, send the coupon.

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RECENT ADDITION—The photo above shows the interior of the recently completed 80 by 160 ft. addition to the Pamco, Inc., Oskaloosa, Iowa plant. Pamco (Productive Acres Manufacturing Co.), manufactures bulk feed and grain delivery trucks and equipment.

winter than in summer. Thus to cover production costs, prices would need to average a little higher in winter than in summer.

In actual practice there has been some seasonal variation in both marketings and prices (see Figures 3 and 4). The seasonal high price in July averaged about 11% higher than the seasonal low price in December for the three years, 1958-60. Thus the average seasonal price movement during 1958-60 was not as wide as would have occurred if there had been a constant monthly rate of marketings. But there has been considerable difference in seasonal price patterns from one year to another.

STABILIZATION OF PRODUCTION—To stabilize year-to-year production at certain specified levels of prices, estimates of average yearly demand and supply forces would be needed. Demand for broilers might be expected to expand about 2% per year because of increasing population and rising incomes.

Costs of producing broilers have declined markedly during the past decade. One experiment showed feed required per pound of broiler gain declined from 3.3 lb. in 1947 to 2.13 lb. in 1961.[2]

It was found in the above mentioned Purdue study that changes in average annual feed costs per pound of broiler produced in a given year were closely related to changes in total broiler production during the following year.

Measures of broiler supply and demand changes over time, along with supply and demand conditions within a given year, can be used to bring about more orderly production and marketing and, consequently, more stable broiler prices.

[2]Reported in the "Poultry and Egg Situation," Economic Research Service, U.S. Department of Agriculture, July, 1961, p. 12.

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Merck Reports Net Sales for Quarter

RAHWAY, N.J. — Merck & Co., Inc., reported that consolidated net sales for the quarter ended Sept. 30 were $57,648,000, compared with $55,730,000 for the third quarter of 1960. Estimated net income after taxes was $6,941,000, compared with $7,048,000. Earnings per share of common stock were 64¢, compared with 65¢ for the 1960 quarter, based on the average number of shares outstanding.

For the first nine months of 1961, consolidated net sales were up 2% from 1960. Estimated net income after taxes declined 12%. Earnings per share of common stock for the nine-month period were $1.78 this year, compared with $2.02.

Contributing to the decline in net income after taxes for the nine months was the fact that the tax accrual was 50%, compared with 46% for the first three quarters of 1960, the report said. John T. Connor, president, said foreign and domestic competition in many product lines continues to be acute, resulting in lowered prices and narrowed profit margins.

Ask Poultry Growers About 'Seal' Program

CONCORD, N.H. — The New Hampshire Department of Agriculture has asked the New Hampshire Poultry Growers' Assn. whether state poultrymen think they are getting as much in the Seal of Quality program for a $2 fee as poultrymen are getting in New Jersey, where the state charges license use fees ranging from $100 to $800.

It has been decided by Perley I. Fitts, commissioner of agriculture, and his 10-county agricultural advisory board that it is up to New Hampshire's $30 million poultry industry to make the decision.

If poultrymen decide the present $2 fee is satisfactory, with the amount of policing it now provides, the issue probably will be dropped. On the other hand, if the New Hampshire poultrymen think New Jersey has the better approach, the agricultural policy-makers will take a new look at the situation.

Although New Hampshire's Seal of Quality program was inaugurated for use on all agricultural products, the poultry commodity group has made the most use of it.

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Look at Burlap's advantages through *his* eyes!
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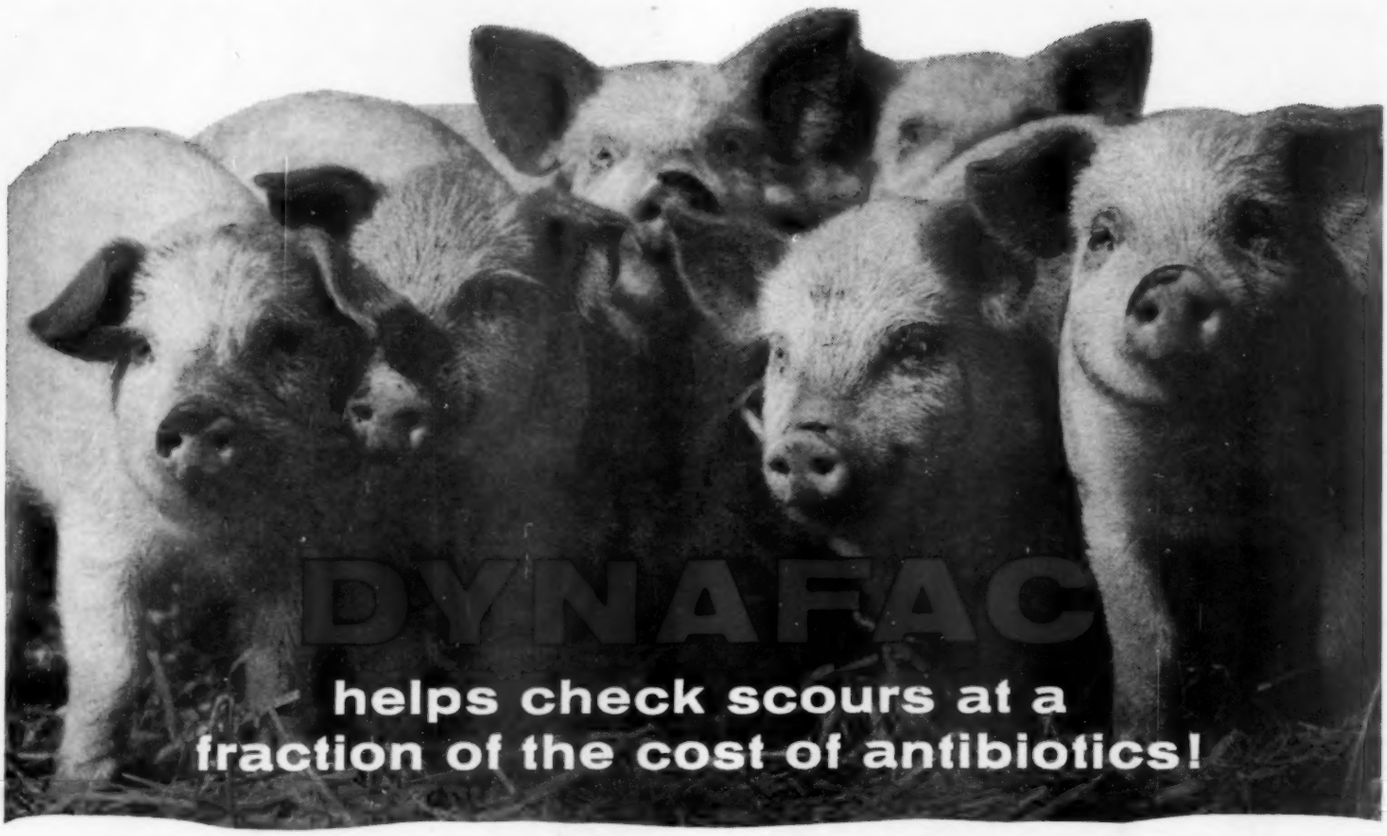

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says RAYMOND BUNKER

"When scours strikes, you can lose a few before it gets straightened up . . . and there go your profits for the litter! I am sure glad my feed company started putting DYNAFAC in their pig starter . . . I have not had any scours trouble since."

MERCK CHEMICAL DIVISION

MERCK & CO., INC., RAHWAY, N. J.

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Management Important in Condemnation Control

RICHMOND, VA.—Management is an important factor in the control of condemnations, according to a preliminary report on broiler discards in the Shenandoah Valley by Dr. Walker S. Thompson, U.S. Department of Agriculture veterinarian who has been on loan to the Virginia Department of Agriculture to study the problem.

The study was initiated in April, and 13 flocks consisting of 233,000 broilers were placed under observation from the day the chicks were delivered until sent to processing plants. Seven flocks, totaling 90,600 broilers, were processed when the preliminary report was issued.

Whenever possible, Dr. Thompson observed the birds being processed.

"It is quite clear that one cannot use the appearance of a flock in the field to predict the percentage that will be condemned," he said.

Conditions Listed

He listed conditions which may have caused increased condemnations:

Overheating — Birds became too hot during morning hours before windows were opened.

Overcrowding—Less than 1 sq. ft. per bird during hot weather and less than .8 sq. ft. during cool weather.

Wet litter—Due to faulty automatic fountains, failure to stir litter and defective roofing.

Poor ventilation—Poor window arrangements, absence of ridge ventilators, inadequate number and size of ventilators, the house being too wide and poor management.

Excess ammonia—This was noted especially in houses of block construction.

Footwear—Absence of facilities for cleaning and disinfecting footwear before entering houses.

Sick flocks—Use of common equipment between sick and healthy flocks.

Cull birds—These were left on the premises when flock was sold.

Ages — Flocks of different ages were reared on same farm.

Turkeys and chickens—Raised in adjacent houses.

Turkey poults—Poults brooded in houses previously used for broilers.

Feeders—Failure was noted in removing box top feeders from the brooder house.

Feed—Bags of feed were kept in brooder room. Also noted was dirty feed rooms and wood feed bins located in brooding rooms.

Sparrows and rodents — Management failed to screen out these two.

Farm animals—Allowed access to broiler houses.

Symptoms—When symptoms indicating respiratory and distress appeared, they were not recognized at the start and were not diagnosed.

Starts — Starting chicks at temperatures below 96°.

Dr. Thompson also noted dilution of Newcastle and bronchitis vaccine to achieve a mild reaction; lack of uniformity in debeaking, and lack of adequate supervision of flocks by servicemen. Some growers seldom see a serviceman unless the grower reports a suspected disease condition, Dr. Thompson reported.

VIEW LABORATORY — Twenty county agents and vocational agriculture instructors, the winners in the F. H. Peavey-sponsored "Quality Crops Production" program in Montana and North Dakota, and the "Clean Grain" program in Minnesota and South Dakota, were guests of The Dow Chemical Co. at its Midland, Mich., headquarters. Staffmen from experiment stations in the four states and Peavey officials also participated in the three-day tour of Dow facilities. Above, Dr. Julius E. Johnson, second from right, manager of Dow's agricultural chemicals department, describes laboratory research methods to Willis Miller, left, assistant director of the Peavey agricultural department, county agent Maurice Ellingson, second from left, Dickinson, N.D., and extension agronomist Lars Jensen, right, North Dakota State College, Fargo.

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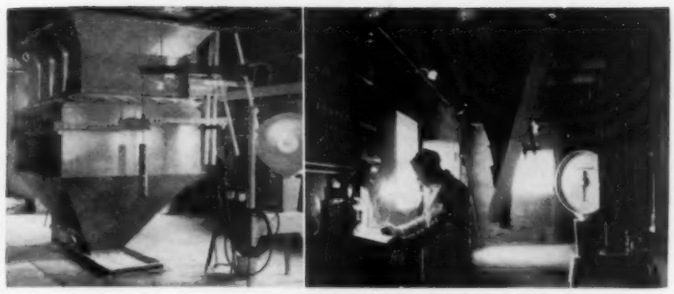


Scale hopper above mixer and operations control area are viewed from opposite positions here. Scale dial can be seen easily from where Willis Wood, mill superintendent, stands at desk (second photo). In front of him is control panel, and behind him are huge levers.

Ideal Site for New Mill Found When Highway Forces Move

By Robert H. Brown
Feedstuffs Special Writer

Walley Milling Co. of Oxford, Ala., is only one of many feed manufacturing concerns that have had to relocate their operations because of encroaching highway construction, but, in all probability, the firm was more fortunate than most others when it found an abandoned grain storage and drying installation on a site just right for a new mill.

The Walley brothers, Dewey and Bourbon, now have in operation on busy U.S. Highway 78 between Birmingham and Atlanta, a new mill which they say has the potential of turning out 400 tons of formula feed in an 8-hour shift. Their old mill, which stood between Anniston and Jacksonville, Ala., had a production capacity of 80 tons in 8 hours.

Nearly all of the new plant's current output—about 98%—is used to supply contract growers of broilers, broiler-type hatching egg layers and hogs. The greatest proportion of this production goes to the broiler growers. With a million broilers on feed at a time, Walley Milling's contract growers produce about 5 million birds a year. In addition, 40,000 layers are kept in production to supply broiler eggs for hatching. And, the Walleys have more than 150 hogs on feed under contract.

Dewey Walley

Bourbon Walley

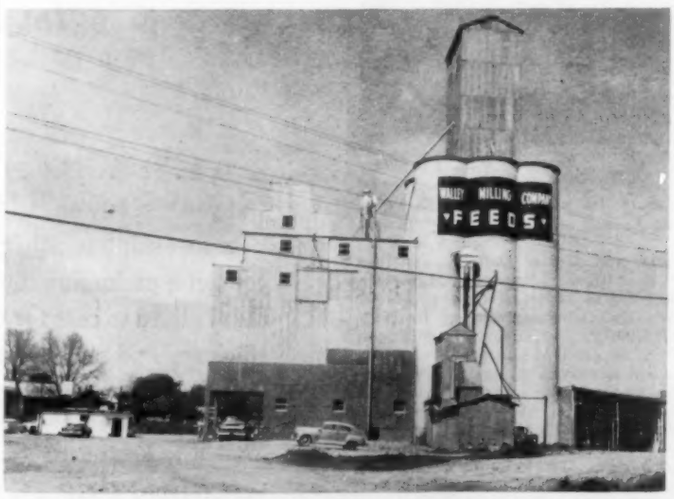
The remaining 2% of total production is sold at retail to nearby cattle, hog and poultry feeders.

Bulk trucks are loaded from overhead load-out bins in this weather-protected area on side of new mill.

Mill Location

The former owners of the grain and storage and drying installation which the Walleys are now using, operated the unit for several years and then moved out. The Walleys built their new push-button and lever controlled mill (designed by Sprout-Waldron) so that it adjoins the storage structures—six concrete silos, each big enough to hold 10,000 bu. of corn. The Walleys now have eight times more storage capacity than they had at their old location.

Doors and other openings were cut into the silos to connect them with the new feed mill. Floors were built inside the silos on the same level as floors in the new mill. Space below



New feed mill of Walley Milling Co., Oxford, Ala., was built next to tall storage bins vacated by previous owners. The shed at right shelters area where grains and concentrates are unloaded from trucks and rail cars into an auger. Bulk truck loading area is on the left side of the mill and at far left is one-story building used for offices and scale house.

Bagged feeds are stored by the Walleys in this concrete block building which adjoins the new feed mill.

these silo floors houses workshops, equipment for cracking corn and other facilities. Space above these new floors still is used for storage of corn, oats and milo.

"We were fortunate in being able to buy the property at a very low price because it was not being used," said Dewey Walley, who handles the business affairs of the firm. "We figured the silos would come in handy, saving us the cost of erecting storage facilities."

Walley broiler growers are scattered over nine counties in Alabama. Four bulk trucks (98% of the mill's output is handled in bulk) fan out from the mill in all directions to deliver feed to growers.

Concentrates, shipped to the mill by rail from the Cartersville, Ga., plant of Hales & Hunter Co., are augered underground from a rail siding and elevated into 16 overhead bins in the new mill which have a total capacity of 300 tons.

Separate inventories of different concentrates for broiler, breeder, grower, layer, dairy and hog rations are maintained.

Since most of the corn received by the mill is trucked, an unloading shed was erected between the storage silos and the railroad siding. The auger used for unloading concentrates from rail cars is also used for unloading grain from trucks.

Steady Operation

Because of the availability of vast storage space, the Walleys are able to operate their mill on a fairly steady schedule. Reserve supplies of finished feeds are built up when feed consumption is relatively low.

Most of the equipment in the new mill was supplied by Sprout-Waldron. One exception is a Jay-Bee hammermill.

After the grain is run through the hammermill, it is mixed with concentrate in a 2-ton horizontal mixer. Air is used to operate a gate which unloads ingredients from the scale hopper into the mixer and another gate which dumps mixed feed from the mixer into the surge bin.

Bulk finished feeds are stored in eight load-out bins which have a total capacity of 104 tons. The small amount of finished feed which is sold at retail in bags is sacked-off from one or several of the 16 overhead ingredient bins in the new mill.

Loading of bulk trucks is done in a weather-protected area. The trucks are checked in empty and weighed again after loading on scales just outside a one-story office building.

Part of the Walley feed manufacturing operation is a maintenance shop where trucks and mill equipment are repaired and serviced. This phase of the business is directed by Bourbon Walley, who is also responsible for mill operations.

Willis Wood, mill superintendent, has adopted a policy of keeping the new mill and equipment as clean as possible. "Once a week, at least, we clean everything," he said. "We remove dust from equipment with an air hose."

The grain drying equipment which the Walleys acquired when they changed locations is not being used now, but they are maintaining it for possible use in the future.

Equipment and production areas in new mill at Oxford, Ala., are cleaned regularly with an air hose.

Speakers Named For Florida Event

GRAND BAHAMA ISLAND — A series of 20 and 25-minute speeches make up much of the program for the 1961 Florida Feed Dealers Assn. annual nutrition conference here Nov. 16-19. The conference will be at the Grand Bahama Hotel, West End, Grand Bahama Island, 50 miles off the Florida coast opposite West Palm Beach.

Sessions are planned the mornings of the 17th and 18th.

Following welcomes by Jack Feaster, chairman of the conference steering committee, and Russ Godwin, president of the association, the Nov. 17 program will include:

Effects of tenderizers on beef cattle feeding programs, by Dr. A. Z. Palmer, University of Florida; effects of climate on dairy cattle, by Dr. S. P. Marshall, University of Florida; factors affecting egg shell quality, Dr. J. R. Couch, Texas A&M; urea for ruminants, Dr. W. M. Beeson, Purdue University; high-salt feeding, Dr. G. Bohstedt, Salt Producers Assn.; outlook for the use of amino acids in laying hen feeds, by Dr. Laurent Michaud, Merck & Co.; what's new in swine nutrition, Dr. H. D. Wallace, University of Florida, and interpretation of new state and federal feed laws, by Harold Hoffman, chief of the Florida feed laboratory. Doyle E. Connor, commissioner of the Florida Department of Agriculture, will be luncheon speaker.

The morning of Nov. 18 the program will include: Re-evaluation of citrus pulp as a feed, by Dr. C. B. Ammerman, University of Florida; texture of grain in dairy and beef cattle feeding, Dr. J. F. Hentges, University of Florida; vitamin A and carotene in cattle feeding, Dr. Beeson; restricted feeding of laying hens, Dr. Couch; new developments in silage, Dr. C. B. Bender, Sperry Rand Corp.; effect of calcium-phosphorus ratio on mineral requirements (poultry and livestock), Dr. R. H. Harms and Dr. G. E. Combs, University of Florida, and use of electronic computers in feed formulation, by a representative of the IBM Co.

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STEAM ROLLING—Looking at steam-rolled grain samples from the newly-installed equipment at the Big Sandy (Mont.) Grain Co. are: Harry Johnson, vice president and manager of the feed division of Montana Flour Mills Co., Great Falls, Mont.; Ray Aman, manager of Big Sandy Grain Co.; Ralph Welch, Atwood-Larson Co., Great Falls, Mont., and Alfred Ophus, Big Sandy rancher and certified public accountant who is president of the local corporation which owns Big Sandy Grain Co.

Interest in Feeding Of Barley Growing

BIG SANDY, MONT.—Attesting to the growing interest in barley feeding generated by the quantities of barley produced on diverted wheat acreage is the opening of steam-rolling installations here and at Ft. Benton, just 40 miles south of here, during the last month.

Neither Big Sandy nor Ft. Benton, both located in Montana's famed Golden Triangle area, had such service available locally before, it is reported.

The Big Sandy Grain Co. here held open house Oct. 20 to show the public its new facilities. Newly-installed equipment includes a 36 in. Caird steam roller, scalper, stoner and 50 h.p. boiler. Dry supplements and liquid molasses can be added in the plant. Big Sandy Grain Co. is a dealer for Ceretana Feeds, manufactured by Montana Flour Mills Co.

A HIT—Nelson Morris II, president of Darling & Co., shows tickets for the company-sponsored "Good Neighbor Night" at Chicago's Comiskey Park to Arlene Glavas. She is among the employees of Darling & Co. who helped distribute 1,000 tickets for the last White Sox home baseball game to "Back of the Yards" neighbors of the firm, one of the large employers in the Chicago Stock Yards.

IF YOU'RE CHANGING YOUR TAGS FOR 1962

a reminder about feed tag registration

Now is the time to register your feed tags for the coming year. You'll want to check your label to make certain all the ingredients are listed. If you are planning to use Santoquin® in your feeds any time next year, you'll want the ingredients portion of your tag to read *"ethoxyquin a preservative."*

SANTOQUIN . . . is *not* a drug additive but a food additive, so no drug clearance is needed . . . merely registration. If you have any questions about state requirements, contact your state feed control official or a Monsanto representative for details.

SANTOQUIN . . . (*ethoxyquin*) is appearing on more and more labels since it has been cleared for all animal feeds under Food and Drug Administration Regulation 121.202. Most alfalfa dehydrators have accepted Santoquin as a standard practice. If you are using top-quality alfalfa treated with Santoquin, your tag should indicate *"preserved with ethoxyquin."*

SANTOQUIN . . . is the *only* feed antioxidant that stabilizes vitamin A through digestion and metabolism in poultry and livestock, preserves carotenes, prevents rancidity in feed and improves performance of poultry. Only four ounces of Santoquin per ton of feed assures you full return on your dollars spent for vitamin A activity.

To have your tags ready for the coming year, register them now with the *only* ethoxyquin on the market . . . Santoquin.

Monsanto

Please write if you have any questions about registering Santoquin.

MONSANTO CHEMICAL COMPANY
Agricultural Chemicals Division, St. Louis 66, Missouri

Talk Levies, Poultry Products Market

OTTAWA, CANADA — Proposals for the introduction of a system of levies, and for the gradual establishment of a common market organization for eggs, egg products and poultry meat have been made by the European Economic Community to the Council of Ministers of the British Commonwealth, the Commonwealth Economic Committee has reported in its Intelligence Bulletin.

For trade between member countries a proposed levy would consist of two elements. One would be a sum equal to the effect on feeding costs of the difference in feed prices between countries. Since other costs of production also vary between countries, the second element would be a fixed sum equal to the effect produced by the customs duties in force between the member countries on July 1, 1961. This element would be removed in six years.

Levies on trade with non-member countries would consist of three elements, the first and second similar to those proposed for inter-community trade. The third is equal to a duty of about 5% for eggs and 6% for poultry-meat imported from non-member countries. As under the treaty establishing the community, it is necessary to give a preference to imports from other member countries.

In addition to levies on imports from non-member countries, a minimum import price will be calculated to encourage the maintenance of stable prices, and to avoid fluctuations in production.

Monies collected from the levy on imports from another member country would be credited to the importing country. Levies on trade with non-member countries would also be collected by the importing country which will pay into the guidance and guarantee funds for eggs and poultry meat a progressively larger share of the proceeds.

The proposed system would replace measures such as customs duties, taxes and other restrictions now imposed by individual member countries. Proposals are now for the Council of Ministers to decide upon. Adoption of the proposals by the council must be by unanimous vote.

BEGIN SOYBEAN OPERATION

ENGLAND, ARK.—The Export Grain Corp.'s $250,000 soybean cleaning and storage plant at England has begun operating.

Fleischmann's F·I·D·Y
IRRADIATED DRY YEAST
RICH IN VITAMIN D FOR FOUR-FOOTED ANIMALS

Paul R. Niswander (left), Treasurer of Farmers' Fertilizer & Feed Co., Westminster, Maryland, and John P.W. Beard (right), President, accept congratulations from Mayor Joseph L. Mathias during recent open house activities.

MORE for your money WITH WAYNE PERSONALIZED SERVICE

"Personalized service and top quality Wayne Feeds have helped us get more than our share of the market potential in the areas we serve," says Paul Niswander, Treasurer of Farmers' Fertilizer & Feed Co., Westminster, Maryland. One of the East's largest and most progressive feed dealers, they operate 5 branch retail outlets in addition to the headquarters at Westminster.

Farmers' Fertilizer & Feed Co. believe in and practice, good customer oriented, dealer and farmer relations. The firm's basic sales philosophy, set forth by President John P.W. Beard, is "to give our customers quality products and courteous service at a fair price."

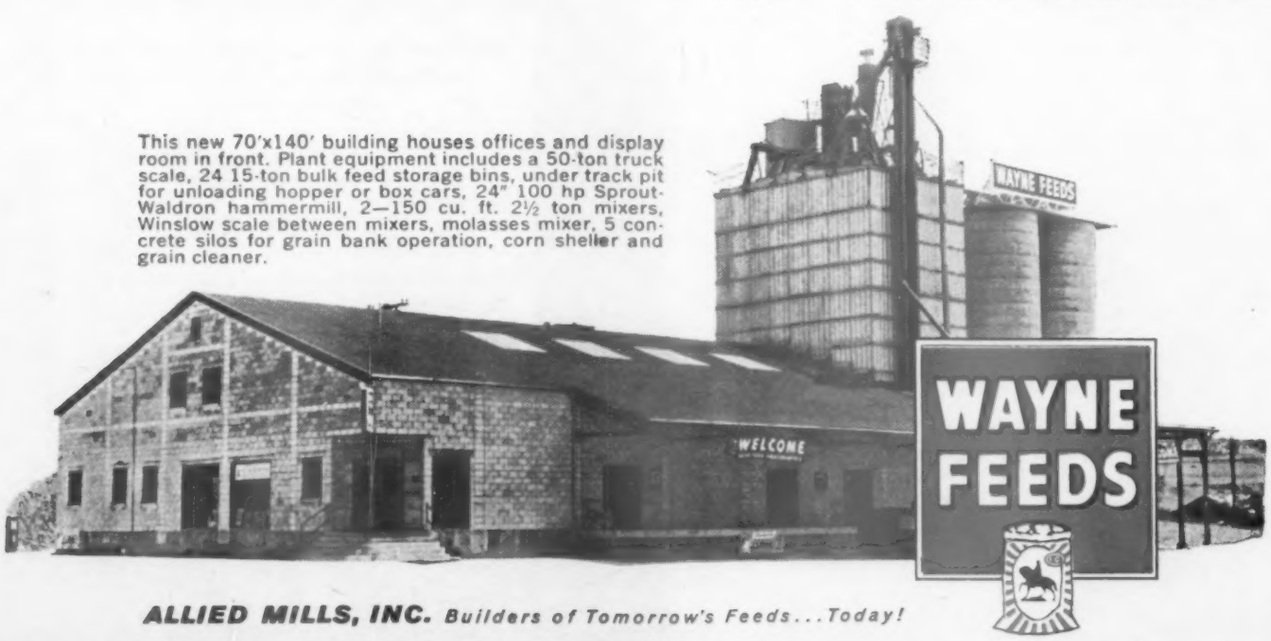
Since becoming a Wayne Dealer in 1937, they have found that Wayne's high-quality feeds and personalized service fitted right in with their own aims. The result has been a constantly improving sales record. To keep their customers informed of new feeding practices and feeding news, the firm sends, as they have for the past 25 years, the Wayne Barn-E-Gram to customers and prospects each month. Additional promotion in the form of Wayne Direct Mail pieces, large display newspaper ads and radio is also used.

This progressive Wayne dealer knows that personal on-the-farm contacts are essential in today's feed picture. They rely on their Wayne representatives working with their own outside salesmen to keep customers informed on the rapidly changing agricultural picture.

Right now is the time to get the "More for Your Money" extras of Wayne Personalized Service such as: Sales Training for dealers and employees...Guidance and help in establishing bulk, grinding and mixing and grain bank programs . . . Resale work by trained Wayne representatives . . . Technical assistance by poultry and livestock specialists . . . Advertising and Promotion support both nationally and locally, plus others.

Write: Allied Mills, Inc., Service Offices, Fort Wayne 1, Indiana.

This new 70'x140' building houses offices and display room in front. Plant equipment includes a 50-ton truck scale, 24 15-ton bulk feed storage bins, under track pit for unloading hopper or box cars, 24" 100 hp Sprout-Waldron hammermill, 2—150 cu. ft. 2½ ton mixers, Winslow scale between mixers, molasses mixer, 5 concrete silos for grain bank operation, corn sheller and grain cleaner.



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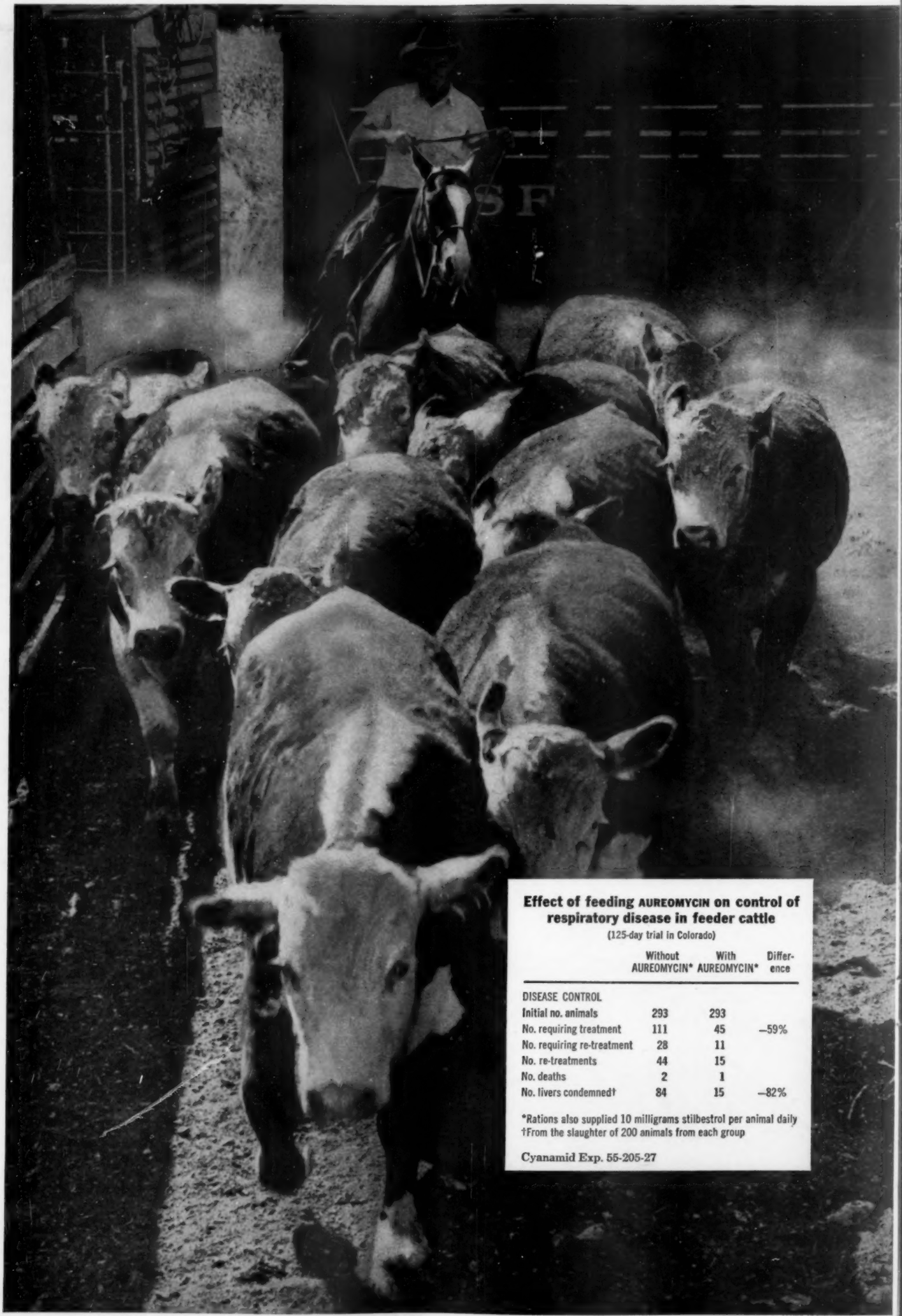

Effect of feeding AUREOMYCIN on control of respiratory disease in feeder cattle

(125-day trial in Colorado)

	Without AUREOMYCIN*	With AUREOMYCIN*	Difference
DISEASE CONTROL			
Initial no. animals	293	293	
No. requiring treatment	111	45	–59%
No. requiring re-treatment	28	11	
No. re-treatments	44	15	
No. deaths	2	1	
No. livers condemned†	84	15	–82%

*Rations also supplied 10 milligrams stilbestrol per animal daily
†From the slaughter of 200 animals from each group

Cyanamid Exp. 55-205-27

HOW TO CUT LOSSES FROM SHIPPING FEVER WITH AUREOMYCIN IN STRESS FEEDS

When you provide formula feeds containing high levels of Aureomycin, you're supplying your cattle feeders with today's most effective way to prevent setbacks from stress of shipping, unloading, weather changes

Stress feeding with high levels of AUREOMYCIN® for all newly-arrived cattle — that's the protective, money-making measure more and more farm feeders and commercial feedlot operators are taking.

As a result, many feed manufacturers formulating these stress feeds are discovering a new and profitable source of income.

First few weeks critical period

Those first two or three weeks following the arrival of cattle are critical. Shipping leads to stress. Unloading and sorting add new stress. Changes in surroundings or in weather — new feeds and feeding methods — add still more stress.

Stress often brings on shipping fever, bacterial diarrhea, foot rot, secondary bacterial infections, subclinical or invisible diseases.

Stop losses for your customers

Stress feeds with AUREOMYCIN help minimize losses from these diseases. Provide your customers with feeds that will give 350 milligrams of AUREOMYCIN per head per day — *to be fed until the critical period is past.* No antibiotic, chemobiotic, drug or hormone equals AUREOMYCIN in its activity against disease. Cattle getting stress levels of AUREOMYCIN *every* day come through the critical period strong and vigorous — go on full feed quickly. After the critical period, cattle can be continued all the way to market on feeds that provide 70 milligrams of AUREOMYCIN per head per day. This will keep them healthy and making economical gains.

Value of AUREOMYCIN in the ration of fattening cattle
(86-day trial in Nebraska)

	Without AUREOMYCIN*	With AUREOMYCIN*	Benefits from AUREOMYCIN
Number of cattle	205	208	
Average initial weight (lb.)	846	859	
Average final weight (lb.)	1163	1195	
Average gain per steer (lb.)	317	336	19 lb. extra
Average daily gain (lb.)	3.66	3.88	0.22 lb. more
Feed per cwt. gain (lb.)	760	690	9.2% less feed
Cost per cwt. gain (feed, labor, etc.)	$19.18	$18.27	$0.91 less cost
Extra return per head	—	—	$4.26

*Rations also supplied 10 milligrams stilbestrol per head daily

Cyanamid Exp. 56-200D-7

Shown above are the results of an experiment with AUREOMYCIN in the ration of fattening cattle. In this trial, AUREOMYCIN was fed to one group of cattle at the rate of 350 milligrams per head per day for the first 30 days followed by 70 milligrams per head per day for the remainder of the trial. Note these significant advantages with AUREOMYCIN: (1) increased average daily gain by 0.22 pound (19 pounds in 86 days); (2) improved feed conversion by 9.2%; (3) reduced feed cost 91¢ per 100 pounds of gain; (4) gave an extra return of $4.26 per head. In addition, AUREOMYCIN reduced the incidence of shipping fever, pneumonia and rhinotracheitis. Cattle fed AUREOMYCIN were more uniform, had better bloom.

Aureomycin prevents shipping fever

In the table shown on the opposite page, you can see the effectiveness of AUREOMYCIN in controlling respiratory diseases in cattle. In this experiment AUREOMYCIN was fed at the rate of 350 milligrams per head daily for 7 days, followed by feeding 70 milligrams per head for the remainder of the experiment. Note the high reduction (59%) in the number requiring treatment in the group fed AUREOMYCIN. This lot produced over 7,000 extra pounds of beef!

Recommend stress feeding

If you are not now making a stress feed containing high levels of AUREOMYCIN for feeder cattle, plan to do so. There's extra profit in such feeds for your feeders — and extra sales volume for you through increased customer satisfaction. Complete details on stress feeds containing AUREOMYCIN are given in a new booklet, "How to Build Bigger Beef Profits." This booklet is for distribution to your customers. For your copies get in touch with your Cyanamid representative or write direct to American Cyanamid Company, Agricultural Division, Princeton, N. J. *®AUREOMYCIN is American Cyanamid Company's trademark for chlortetracycline.*

The label instructions on Cyanamid products, and on products containing Cyanamid ingredients, are the result of years of research and have been accepted by Federal and/or State Governments. Always read the labels and carefully follow directions for use.

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20,000 International Units of vitamin E per pound. The only way you can be sure a feed has vitamin E is to add vitamin E. Substances that merely protect vitamin E are worthless if there's no vitamin there to protect. With *Myvamix*, you know the E is there. The cost is only a few dimes per ton of feed.

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VITAMIN E

FOR USE IN THE MANUFACTURE OF REGISTERED FEEDS

20,000 INTERNATIONAL UNITS OF VITAMIN E PER POUND

IN THE FORM OF DISTILLED CONCENTRATE OF D-ALPHA-TOCOPHERYL ACETATE ABSORBED ON SOY GRITS AS A CARRIER.

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d- When nature makes vitamin E, she gives to each molecule a "right-handed" twist. A less effective form, known as "*dl*," consists of both "right-hand" and "left-hand" molecules in equal numbers. The vitamin E in *Myvamix*, like the vitamin E in nature, is all "right-handed"—all *d-*. It's 36% more potent than the man-made variety.

alpha- At least seven plant substances—tocopherols—have vitamin E activity. Far and away the most effective member of the tocopherol family, biologically speaking, is "alpha." To equate tocopherol with vitamin E is misleading. Corn, for example, is rich in tocopherol. But nearly 90% of its tocopherol is in non-"alpha" forms of weak vitamin E effect. "Alpha," the biologically effective tocopherol, is what you get in *Myvamix Vitamin E*.

tocopheryl acetate The "acetate" means that the vitamin E in *Myvamix* is really stable. Tests show no loss of potency even after storage in finished feeds for six months at 100° F. The full potency you put in the feed is there when the feed is fed.

soy grits The vitamin E in *Myvamix* is on a dry, non-dusting soy grits base. We use grits instead of meal because they have less fiber, less moisture, more protein, more uniform particle size, and are dusted to remove hulls and powder. All this means a higher quality product, one that's as easy to handle as anything in your mill.

DPi This is the place to come for information or a quotation on *Myvamix Vitamin E*. Write ***Distillation Products Industries,*** Rochester 3, N. Y. Sales offices: New York and Chicago • Charles Albert Smith Limited, Montreal and Toronto • Or call the distributor nearest you.

Grain Shipping Costs Blamed For Virginia Poultry Problems

RICHMOND, VA. — In recent years, expansion in the poultry industry has moved away from Virginia, and one of the big reasons lies in the transportation rates applying to feed grains that are such a large portion of production expenses for all poultry enterprises.

Virginia's poultrymen heard this report at the 31st annual convention of the Virginia State Poultry Federation in Richmond. Presenting the report were R. H. Strickler, a feed manufacturer from Harrisonburg, Va., L. N. Conyers and S. M. Carbaugh of the Virginia Department of Agriculture, Richmond.

Low rates on shipments of Midwest grain down the inland waterways have put Virginia in a progressively worsening competitive situation with the southeastern area. As poultry production became more and more competitive and poultry prices declined, the advantage enjoyed by the southeastern area continued to increase until today it amounts to over 1¢ lb., the panel said.

The Southern Railway System is offering a competitive rate on Midwest grain shipped by rail in 20, 10 and 5 car lots, with a minimum weight of 180,000 lb. per car. Application of these rates to Virginia would reduce Virginia's present disadvantage on broilers, for instance, from better than 1¢ lb. to less than 1/6¢ lb.

Virginia's poultry industry vitally needs to have its competitive disadvantages reduced, it was pointed out. Poultry is big business in Virginia. In 1960 the gross income from broilers, turkeys, and eggs amounted to $83,697,000 which was 15% of all Virginia's gross farm income.

The proposed Southern Railway rates have been suspended until July, 1962, and the Interstate Commerce Commission has scheduled a hearing on the rates for Jan. 30, 1962. A new rail rate on corn being shipped from North Carolina only has been put into effect and is being used in Virginia.

The poultry industry has a decided freight rate disadvantage and immediate freight rate relief is needed to save the industry and expand livestock operations, they concluded.

Must Reduce Costs

A Virginia Polytechnic Institute economist stated that Virginia's poultry industry must reduce its production cost disadvantages and utilize new technology to remain competitive with poultry producing areas in other southern states.

Dr. W. R. Luckham, poultry marketing specialist, in the closing session of the Virginia federation convention, said the proposed reductions in rail rates on grain would put Virginia poultry producers in a more favorable position because of their closeness to major consuming areas of the East Coast.

"The proposed freight rate reduction on grain by a major railroad, if approved by the Interstate Commerce Commission, would mean that Virginia would have approximately 0.2¢ to 0.3¢ per dozen eggs advantage over North Carolina and Georgia eggs in the New York market. On broilers we would have a 0.34¢ lb. advantage over Georgia producers and a 0.17¢ lb. advantage over North Carolina broiler producers," he said.

However, competition will continue to be stiff from these areas, Dr. Luckham said, because of their larger flock sizes and newer housing facilities.

Dr. Luckham pointed out that one way to increase the technology is to expand research work in colleges.

Only One Profit

The poultry industry will be making the decisions for a good part of American agriculture in the months ahead, Parke C. Brinkley, Virginia's Commissioner of Agriculture, said in the keynote speech to the convention.

This will be true, Mr. Brinkley said, because poultry is already far ahead on the road of high-volume, low margin production that other agricultural segments are beginning to travel.

So slim are poultry margins, Mr. Brinkley said, that broilers and turkeys will no longer carry a separate, individual profit for the hatcheryman, producer, feed supplier and processor. Mr. Brinkley said.

"As long as we keep on producing more and more broilers every year, we can expect to see more of those individual profits disappear, aand we can expect to see broilers produced where the industry can get along with fewer profits per bird," Mr. Brinkley said.

But, he said, there ought to be at least one profit between breeding flock and retail store, or there is not much reason for the existence of the poultry industry.

Mr. Brinkley said he thought Virginia's poultry industry would weather the present price crisis as it had weathered other tight spots.

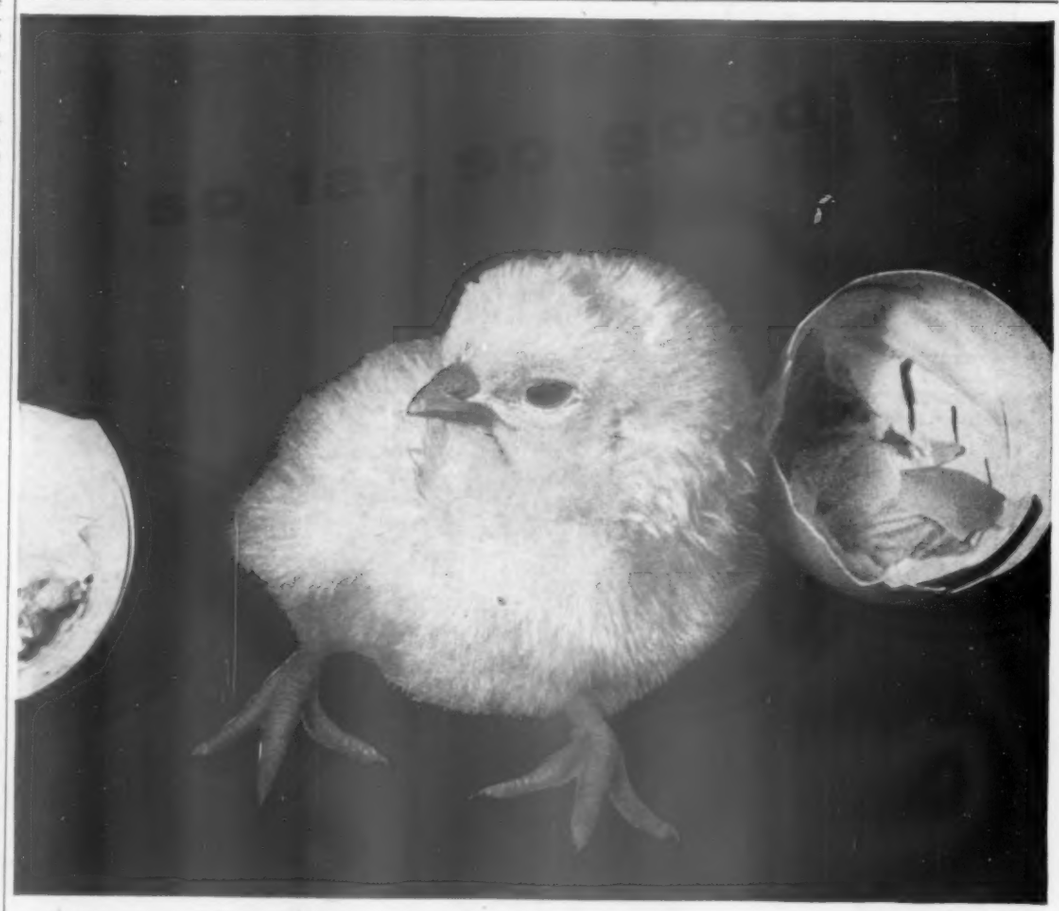
"In the days ahead, the cost of moving production supplies to agriculture and moving agriculture's products to market is going to play a bigger and bigger part in determining who is going to produce what and where it will be produced," the commissioner said.

"Virginia's egg producers were short 856,000 cases of eggs in meeting the state's egg-eaters' needs last year," Dr. Claud Scroggs, Southern States Cooperative, told the egg producers at their meeting during the Virginia State Poultry Convention.

With some southern states producing egg surpluses (North Carolina 1,300,000 cases, and Georgia 1,297,000 cases) egg producers in Virginia are beginning to face rough competition in their own home markets, Dr. Scroggs said.

A recent tour of southern egg production areas by a special committee revealed further expansion in commercial eggs. "Virginia has many natural advantages in the egg production and marketing picture and can meet this competition," Dr. Scroggs predicted.

But, "we must give our support to various organizations in the state to expand markets for our eggs," he said.



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Iowa Feed Operation Has Monthly Budget Checks

By Al P. Nelson
Feedstuffs Special Writer

Many a feed man has checked his first six months' sales against those of a previous year to find they were running 15% higher. Comes a moment of elation, and he says to his bookkeeper, "We certainly are going to have a good year."

Then, along about Jan. 10 of the following year when the accounts are balanced, such a feed man frequently finds that, despite the 15% increase in sales, his net is much, much lower than he figured.

What went wrong?

In most cases, it is steadily increasing costs of doing business which, like weeds in a garden, can grow rapidly overnight.

What's the answer?

Take the word of a successful feed and elevator man at New Sharon, Iowa, B. C. Swanson: The answer is better business management, with a sharp look at operating figures every month.

Mr. Swanson has been operating his business, the Swanson Elevator Co., for almost 10 years. He says that one year he and his men went all out on sales, made a fine annual volume of business. Then, when all the figures were in Mr. Swanson says he discovered he had worked very hard for very little money.

"That taught me a lesson," he grinned. "I began to budget my business so that I would know where I was going each month, what my goals were and if I was behind or ahead of my sales and expense schedules. The results to me have been amazing."

Here is the way this enterprising feed man budgets:

1. Merchandise sales goal for the coming year. He studies what merchandise goals he attained the previous year. He then sets a realistic goal for sales for the current year. He divides this annual sales goal into monthly goals, considering seasonal demand, etc. The percentage of gross profit he wants to get on each merchandise line is then computed:

	1960 Sales	1961 Sales Goal
Purina feed	....	....
Corn	....	....
Oats	....	....
Beans	....	....
Millfeed	....	....
Sanitation products	....	....
Farm supplies	....	....

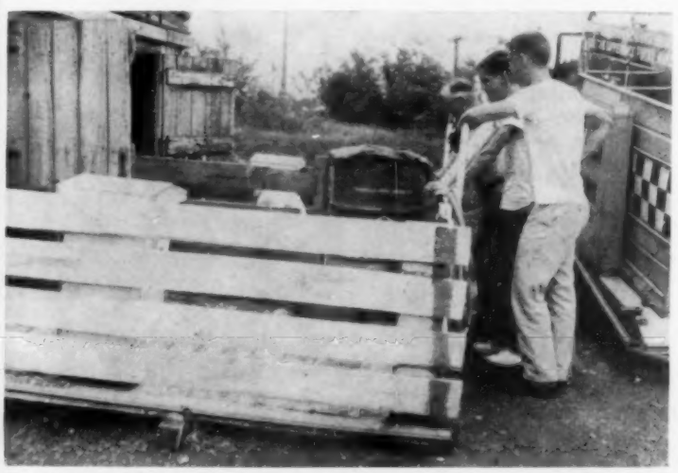
Estimates by Department

"The gross profit is estimated for each department," says Mr. Swanson, "by applying the anticipated gross margin rate to the estimated sales."

Other departments from which Mr. Swanson makes sales, include: Grind-

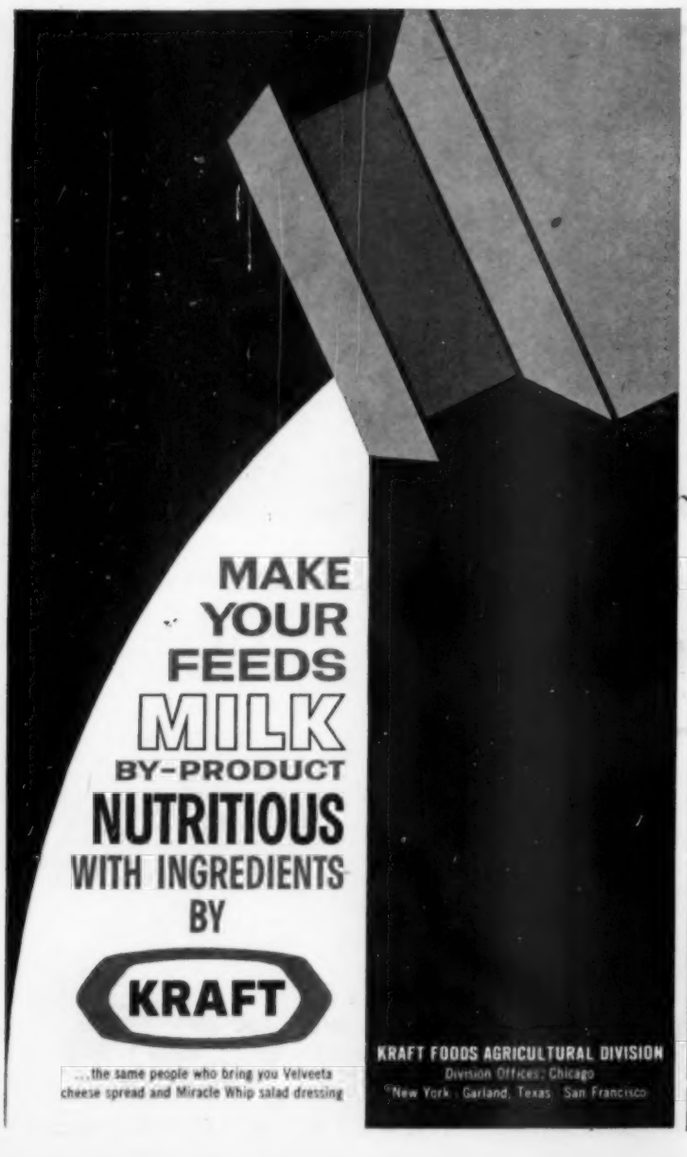
(Continued on page 46)

CUSTOMER RECORDS — B. C. Swanson, right, of Swanson Elevator Co., goes over a customer's records with bookkeeper Robert Higdon. Customer records are always available for consultation on their needs.



DEMONSTRATION—Young farmers are pictured viewing a feeder pig demonstration in the yard of the Swanson Elevator Co., New Sharon, Iowa.

READY FOR DELIVERY—B. C. Swanson talks with a truck driver prior to delivery of a load of feed from the Swanson Elevator Co. Savings on truck expenses have helped him cut over-all operating expenses.



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Put more Health Management in your feeds...

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prevents coccidiosis, promotes growth, improves feed efficiency and pigmentation

Health management means disease prevention—and disease prevention is essential to poultry profits.

Dr. Salsbury's Unistat prevents coccidiosis. Unistat has a unique combination of active drug ingredients, which our tests have shown to be the most effective against *E. necatrix, E. tenella,* and *E. acervulina.* And Unistat allows immunity to develop naturally.

But—more than preventing disease—Unistat puts extra benefits into your feeds: growth stimulation, improved feed efficiency, better pigmentation in chicks and growing chickens. Extra benefits like these enable growers to put more pounds of the best broiler meat into dressing plants. Pounds economically produced. Pounds that give growers a better chance to profit. Pounds that reflect credit on your feed.

So, put more Health Management in your feeds with Unistat—the coccidiostat with extra benefits. Recommend Unistat for broilers from the start, straight through to 5 days before market.

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ing and mixing, handling and storage of grain and shelling and hauling.

"At this point," Mr. Swanson explains, "some dealers make the mistake of estimating the anticipated expenses and subtracting that figure from the gross profit to obtain the net profit. However, a much better method is to first set up a desired or reasonable net profit figure which is subtracted from the gross profit. The balance is the amount available for expenses.

"This amount which is available for expenses is then allotted to the various expense items based on previous experience and future plans.

"You may find the allotment for expenses simply will not cover all the expenses you have to pay for," Mr. Swanson points out. "Then it is

MONTHLY INVENTORY — Pictured figuring his monthly inventory is B. C. Swanson, owner of the Swanson Elevator Co., New Sharon, Iowa. Mr. Swanson keeps a monthly check on his sales, expenses and profits, rather than doing this for a longer period of time.

a matter of going over the whole estimating process again, starting with departmental sales. Can they reasonably be raised from the first estimates? Can price margins be raised to yield a higher percentage of gross profit? Can some desired expenses be eliminated or reduced? Or, will it be necessary to be satisfied with a reduced net profit?"

Expense Classifications

Expense classifications at the Swanson Elevator are: Salary, B. C. Swanson; other salaries; utilities; truck repairs; gas, oil and tires; depreciation on trucks; truck licenses; elevator repair and maintenance; advertising; depreciation on building and equipment; office supplies; payroll taxes; property taxes; permits and tonnage tax; general insurance; business life insurance; employees group insurance; interest audit and legal; rent; discounts allowed; meetings and travel; bad debts; bank charges and sundries; donations, and total expenses. He has other classifications of net operating income, bad

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debts recovered and total net income.

"While we anticipate reasonable profits every year, we should remember that every business encounters poor years occasionally," says Mr. Swanson. "The important thing to remember, regardless of profit, is to be able to analyze the financial statement to determine how to decrease expenses and increase sales in the future."

Mr. Swanson says that the greatest contributing factor toward low profits is excessive expenses. This is a management problem which an owner cannot delegate to anyone else, he believes.

How Expenses Were Cut

How did Mr. Swanson cut his expenses?

He says it took him three years of operating on a budget basis to cut expenses to the point on which he is now operating. "I found I had to lay off some men, reducing from 12 to seven, and use old, fully depreciated machinery another year or so, in order to bring down expenses to the level I wanted to insure a certain profit," Mr. Swanson says.

"I also consolidated duties. I figured that I did not need one man for each truck. Now, when we are rushed for short periods, I hire an outside trucking firm. It's cheaper that way for a brief period, even though the trucker's hourly rate is higher than what I pay my men.

"I have cut down on gas, oil and tires, by requiring that employees leave the trucks at the mill every night instead of using them for transportation to and from the mill every day. I saved on vehicle maintenance by setting up a mechanic in his own business on my premises. He uses my tools, gets free rent, and gives my vehicle work priority at $2 per hour. The rest of the time he is free to drum up his own work—and he likes that.

"Formerly, I had hired a full time mechanic, and that didn't work. Then I took my vehicle service to a local garage where I had to pay $3.30 labor and got no discount on parts. I have an arrangement now where I get discounts on vehicle parts."

Mr. Swanson says he also cut expenses by budgeting his advertising. On the ad budget, he allotted his space and had a legitimate excuse to turn down a lot of one-time ad requests which always crop up. Through a restrictive budget, he found he was inclined to spend less for advertising and make better use of the money available.

Monthly Check-Up

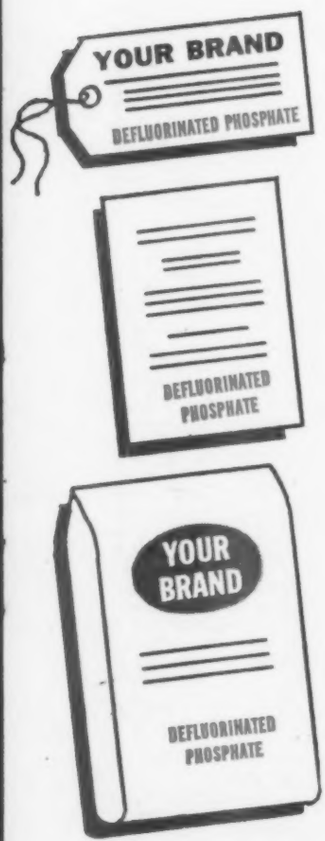
To make his budget system highly effective, Mr. Swanson schedules a monthly check-up. This starts with inventory. Each employee has a special department of the mill and elevator on which he takes inventory. Each employee puts these figures on Mr. Swanson's desk the night of the last day of the month.

Mr. Swanson personally figures the grain bank invoices and the Commodity Credit Corp. inventory. He stores 150,000 bu. grain for the government. All the merchandise inventories, etc., are priced out by Mr. Swanson. He says that it takes him a half day to do this work. He compares his figures with the previous month's records, etc.

He also figures interest payable

...be prepared to take advantage of favorable market conditions...

Include the term "defluorinated phosphate" on your registration forms, bags and tags, and you can interchangeably formulate with either defluorinated or dicalcium phosphate



The AAFCO definition states: "Defluorinated phosphate includes either calcined, fused, or precipitated calcium phosphate. It shall contain not more than one part of fluorine (F) to 100 parts of phosphorus (P). The minimum percentage of calcium (Ca) and phosphorus (P) and the maximum percentage of fluorine (F) shall be stated on the label. The term 'Defluorinated' shall not be used as a part of the name of any product containing more than one part of fluorine (F) to 100 parts of phosphorus (P)." (Adopted 1952)

When you register your feeds to contain defluorinated phosphate, this definition provides for the use of *either* defluorinated or dicalcium phosphate. By inadequate registration, you restrict your phosphorus source.

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and lists all accounts payable on the 10th of the month following. If a month ends on a Monday, for example, he also owes his employees one day's pay, since he pays them every week. He also lists accrued payroll taxes.

"Actually, the monthly expenses just about equal the estimated expenses," says Mr. Swanson. "There are a few deviations, but not enough to make too much difference."

Then, about the 5th of the month, Mr. Swanson gathers his monthly figures and takes them to an auditor in Des Moines. This man devotes about two hours to checking the figures and reviewing with Mr. Swanson his financial rating, etc., and making recommendations.

"We have worked it out so that I can easily bring in the figures the auditor wants," Mr. Swanson says, "and it is worth it to me. The auditor charges me approximately $30 per month for this service. For audits where the man must come to the elevator (once or twice yearly) a higher charge is made.

"This monthly audit is one of the best investments I have made," says Mr. Swanson. "I know exactly where I am going financially, and whether I am ahead or behind my estimated goals."

Another important value of a budget system, Mr. Swanson points out, is that he can spot conditions in his business where the monthly volume and profit are not what he expected. Then he can take remedial measures.

"If you don't discover what departments are sagging until the end of the year, it may be too late to take effective measures to change the trend," Mr. Swanson says.

This feed man also says that when a feed firm has a monthly sales total, this figure is something realistic to shoot at. "If you achieve or come close to your monthly sales goal and, also, the expense base, then you are more likely to wind up the year with a fine sales total and more net profit than you are if you just shoot for a general increase over a 12 month period."

How much additional time does Mr. Swanson spend in handling these specific business management procedures, involving his time and that of employees in taking inventory? He says that, perhaps, 20 hours cover it, but that this is a small investment of time in view of the greater benefits achieved, including more profit.

"You can either direct your business with a planned program and budget, or your business will direct you," Mr. Swanson says.

UP OR DOWN

By Dr. Leonard W. Schruben, Agricultural Economist, Kansas State College

Higher Lamb Prices Due Next Spring

Lamb prices hit the skids the last half of 1960. Since then, there hasn't been much of a change to encourage feeders to believe they will go higher. Prices in the $17-18 range have been the rule so far during 1961. These patterns are shown in Exhibit 1.

Slaughter during January through July, 1961, was 12% over that of the same period of 1960. This action may have set the stage for improved prices the first half of 1962. All during this year, however, increased slaughter will continue to be accompanied by lower lamb prices.

Although the 1961 lamb crop was slightly larger than in 1960, a large part has already moved to market. With prices for fat lambs being at a lower level, fewer may go into feedlots this fall—with more going to market. Official reports indicate commercial sheep and lamb slaughter above the same month a year earlier since May, 1960 (except for December).

If fewer lambs go into feedlots, the stage would be set for higher prices the first half of 1962. Fewer lambs would be available for marketing at that season which would have a strengthening effect on prices.

Sheep and lamb numbers at the beginning of 1961 went down from a year earlier. Marketings indicate another decline is taking place in 1961. The annual count is made each year on Jan. 1. Numbers are being reduced as a result of relatively unfavorable prices. In time, if this trend continues, prices will again turn upward.

Where will this upward price trend start? Before making such an estimate, let's look at past price changes from November to following months.

Direction of price changes from November to three following months is shown in Exhibit 2. This exhibit has been prepared to show you the per cent of times prices have gone up, stayed the same or gone down from November to the following January to March and to May.

EXHIBIT 1. Kansas City Price of Spring and Wooled Slaughter Lambs, 1960 and 1961

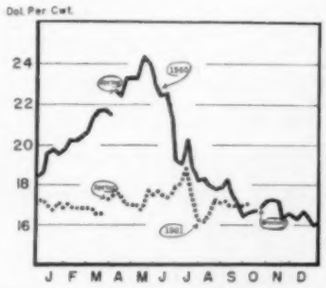
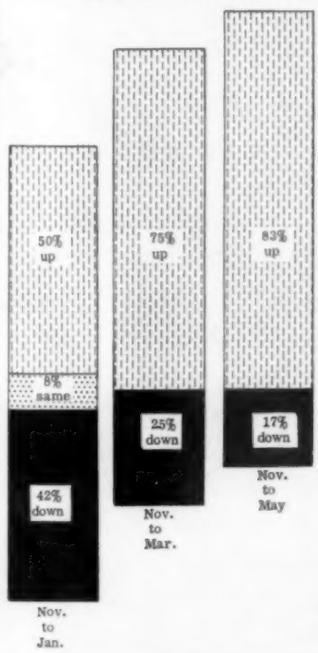


EXHIBIT 2. Changes in Kansas Farm Price of Lambs, 1947-59



Here is how to read the exhibit: The top part of the bar in the first column, for example, indicates the percentage of times that prices went up. In the case of the November-to-January change it was 50%.

The middle part of the bar, where there is one, indicates the percentage of years prices remained the same from November to the months as indicated. The bottom part of the bar shows the percentage of the years prices went down from November.

You will notice that lamb prices have gone up from November to January about half of the years since 1957. From November to March prices have gone up about 3 out of 4 as you can see from the second bar.

Recovery Likely

Lamb prices have a good chance of showing substantial recovery by spring. With lower marketings in prospect and a fairly strong history of price advances from November to the spring months, some improvement is expected. Kansas State economists who pay close attention to livestock marketing estimate prices for slaughter lambs will reach the $19-20 level by the last half of April to the first half of May. This may be the combination that will push lamb prices higher and help keep them there.

Dorn & Mitchell Has New Cholera Bacterin

OPELIKA, ALA.—A new type of cholera bacterin, which in field tests is said to have been effective in treating the disease and as a preventive vaccine, has been made available by Dorn & Mitchell Laboratories, Inc., it was announced by L. R. Patton, manager of the animal health division, Sterwin Chemicals, Inc. Dorn & Mitchell is affiliated with Sterwin.

Developed at Auburn University by Dr. E. C. Mora and associates, the product is being produced by Dorn & Mitchell under exclusive license from the Auburn Foundation. Mr. Patton said the bacterin has been licensed by the Federal Agricultural Research Service.

The company states extremely fast development of protective action, due to its unique formulation, permits the bacterin to be used both in acute outbreaks of fowl cholera and for preventive treatment.

Field and laboratory data have demonstrated that protection resulting from use of the bacterin is effective and long lasting. "Under field conditions, vaccinated birds on contaminated premises remained free of fowl cholera for as long as a year after inoculation," Mr. Patton said.

The new bacterin is available for immediate delivery.

Earnings, Sales Up

NEW YORK—World-wide earnings per share and net sales of Corn Products Co. for the first nine months of 1961 are ahead of those reported in 1960, a record year, according to figures released to stockholders by William T. Brady, chairman.

Per share earnings for nine months rose to $1.34, a 6% increase over the $1.26 for the comparable period in 1960. Share earnings for the three months ended Sept. 30 were 48¢, an increase of 11% over the 43¢ for the same period last year.

Nine months earnings per share figures are based on a net income totaling $29,635,184 on 22,061,406 shares outstanding.

Net sales for the nine months period was $549,605,952, up 5% for the comparable period of 1960.

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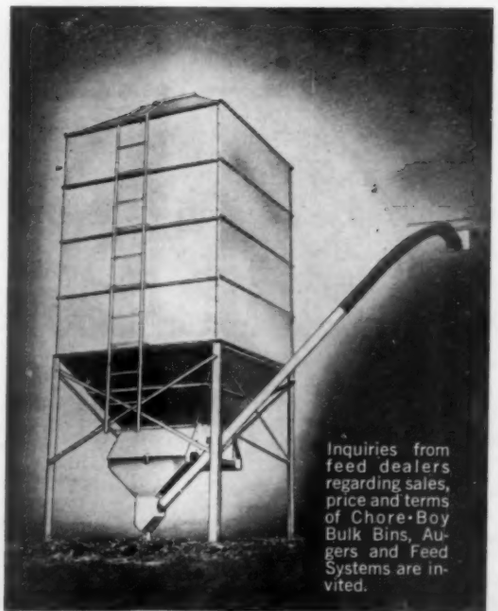
Inquiries from feed dealers regarding sales, price and terms of Chore•Boy Bulk Bins, Augers and Feed Systems are invited.

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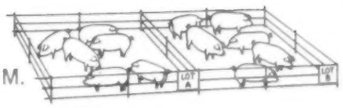
BY SPENCER H. MORRISON, PH.D., D. V. M.



Effect of Feeding Pelleted Complete Rations to Lactating Cows

● P. A. Putnam and R. E. Davis, U.S. Department of Agriculture, Beltsville, Md., Journal of Dairy Science, Vol. 44, No. 8, pp. 1465-1470, August, 1961.

ABSTRACT AND COMMENT

Relatively few studies have been reported so far on the use of complete all-pelleted rations for lactating dairy cows. Low milk fat tests have been reported from the use of such rations (Ronning, 1960). Similar lowering of milk fat test has also been reported when pelleted roughages were used as a part of the diet of lactating cows (Appleman et al., 1960; Fossland and Fitch, 1958; Powell, 1938). The present study by the USDA researchers was conducted with Milking Shorthorns with relatively poor to fair milking ability and fed a ration ground, mixed and, then, pelleted compared to similar animals fed in the conventional manner.

The first experiment consisted of a short-term reversal trial in which a control ration of baled alfalfa and grass hay plus a dairy concentrate fed as a meal was compared to a pelleted low-concentrate ration, a pelleted high-concentrate ration or a high-concentrate pelleted ration plus low quality grass hay scattered on the floor of the pen. This hay was added to try to prevent an anticipated fat depression usually accompanying the feeding of pelleted rations according to previous research by others. The dairy concentrate was comprised of 30% corn, 20% oats, 20% wheat bran, 20% corn gluten meal, 5% linseed oil meal and 5% soybean oil meal. The low-concentrate ration was comprised of 20% of the preceding dairy concentrate, 40% No. 2 alfalfa hay, and 40% grass hay. The high-concentrate pellet was made up of 2.5% soybean oil meal, 10% molasses, 62.5% corn and cob meal, and 25% timothy hay. The amounts of feed offered to the four cows were such that approximately equal TDN intakes were achieved except for those animals fed added hay on the high-concentrate pellet. Adjustment periods and experimental periods were one week each. The primary purpose of this study was to determine if satisfactory levels of feed intake could be achieved with an absence of lowering of milk fat test.

In this trial the variations in milk fat test or in milk production were not statistically significant. Average dry matter intakes for the pellet plus bedding group were higher than for others. It might be argued that the periods were too short in this study to properly determine the possible effect of pelleted rations on fat test. However, Ronning (1960) has stated that such depression occurs within one week after the initiation of pellet feeding. On the other hand, Hand (1960) demonstrated that as much as five weeks or more might be required for such depression. In view of the latter opinion, it was decided to conduct a long-term continuous trial.

A group of 16 cows was allotted to two different rations two days after calving. Prior to freshening, all animals had been receiving hay and corn silage with no concentrates. The control group was offered all the alfalfa hay the animals would eat at the morning feeding and all the grass hay they would consume at the afternoon feeding. The concentrate fed was increased to 8 lb. per day within the first 10-14 days and held at that level for the first 70 days of the trial. During the remaining 28 days on trial, the daily allowance was cut 0.5 lb. each succeeding week. The concentrate used was the same as the previously described one in experiment 1. Due to low production and mastitis, three animals in the control group and two animals in the

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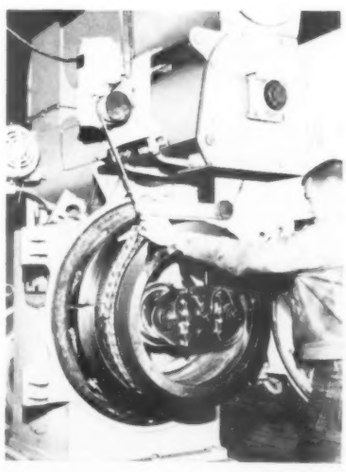
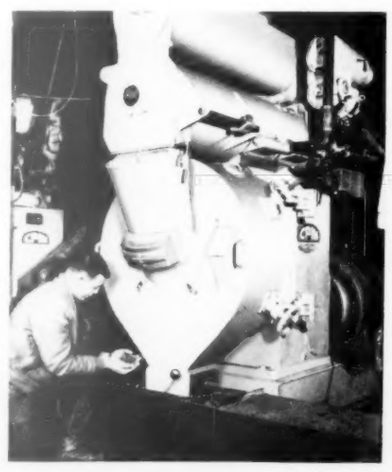


Look at the size of the pellet die, shown here being positioned on the Model "200"! Die is more than twice the size used on largest standard model pellet mills today, yet is easily changed by means of built-in electric hoist.



Charles "Ozzie" Harris, manager of Delta Dehydrating Corp.'s Clarksburg, California plant, checks pellet run on CPM Model "200". This pellet mill is operated 24 hours per day during peak production periods, producing both alfalfa and beet pulp pellets in ¼" size.

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experimental group were removed from the trial prior to completion.

The animals on the experimental pelleted diet were fed the low-concentrate pellet previously described for experiment 1. The components of the pelleted ration were from the same sources as those for the control ration. The amounts offered were such that the cows would barely consume them between feedings.

To utilize the available information in respect to a possible treatment effect on milk fat test, least-squares analyses were conducted to test the differences among animal regressions within treatments. The analyses indicated no significant difference between the control and treatment groups. These results are at variance with those previously referred to above. The reasons for this are not clear from the data, but the authors suggest that they might be attributed to: (1) The presence of a poor quality grass hay in the ration, (2) the coarser grind and larger pellets used in comparison with others (ground through ⅜ in. screen, ⅜ in. die), or (3) a possible breed difference.

Another interesting thing in this current work is that the cows were losing weight as the experiment progressed. Conversely, in reports dealing with low-fat tests on pelleted diets, the cows were apparently gaining in weight. It has been suggested that milk fat depression would be less likely if there are no gains in body weight, and the animal had to mobilize some body depot fat. Furthermore, from limited data, it has been observed that when animals consume a milk fat depressing ration in liberal amounts and then consume submaintenance levels, the milk fat test rises (Van Soest, 1955). These facts may be quite applicable to the results reported by the USDA workers.

It is obvious that we still have much to learn about the various effects of feeding all-pelleted rations to dairy cows. Unlike fattening beef animals, dairy cows of good milking ability have much heavier body and production needs. Furthermore, since the fat test at times can be affected quite dramatically, some degree of caution should still be used. We still know almost nothing about the effects of such rations with cows of exceptional merit or of varying energy levels in the pellets which may be necessary for varying levels of production.

EGG PRODUCTION DROPS

WINNIPEG, MAN., CANADA — Production of eggs in Canada declined 1.1% in September to 34,236,000 doz. from 34,627,000 doz. in the corresponding month a year ago, and 0.5% in the January-September period to 333,173,000 doz. from 334,863,000 a year ago. Average number of layers in September decreased to 28,103,000 from 29,079,000 a year earlier, while number of eggs per 100 layers increased to 1,474 from 1,439.

'Feed Blitz' in Kansas

KANSAS CITY — A promotion designed to get feed information to as many people as possible, a "Feed Blitz," has been held in a group of towns in eastern Kansas.

Chase Wilson, director of the feed division of Consumers Cooperative Assn., said similar promotions are planned in other areas.

Cooperatives in nine communities participated in Kansas: Gardner, Greeley, Holton, Lawrence, Mound City, Powhattan, Paola, Robinson and Valley Falls.

Guy Williams, Kansas district manager, nine fieldmen of this staff and six men from the Kansas City staff, including Dr. Wilson, worked on the operation. They met Co-op managers and boards in planning sessions, then local CCA men went out in pairs to talk with farmers about feeding and feeds. They talked mainly with farmers who were not users of co op feed. At the end of the week during which the calls were made, each co-op held an open house, to which the farmers had been invited. The co-op featured feed at the open house, and all had good sales, it was reported in Co-operative Consumer.

Mr. Wilson said he is confident a series of these blitzes over the region will reach 50,000-75,000 farmers who are not now patrons of their community cooperatives.

Animal Health Group Initiates Program

DES MOINES — Initiation of a new far-reaching public relations program for the Animal Health Institute for 1962 has been announced by James E. McCabe, president of the group headquartered here.

Mr. McCabe said that Jim Roe, director of the agricultural division of E. H. Brown Advertising Agency in Chicago, has been named public relations counsel for the institute.

The institute president said that the agency group will maintain close liaison with institute public relations officials in the preparation and dissemination of information and coordination of special activities. He pointed out, "Through the combined research and development programs of animal agricultural product manufacturers, Animal Health Institute members protect the public welfare and provide more economical ways for highest quality animal products to reach the consumer."

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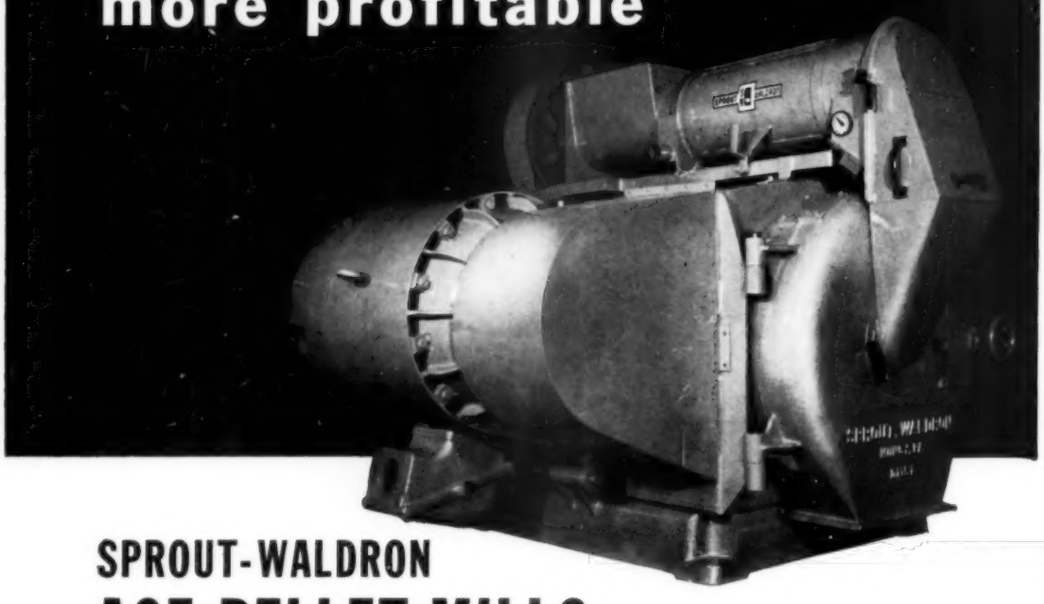

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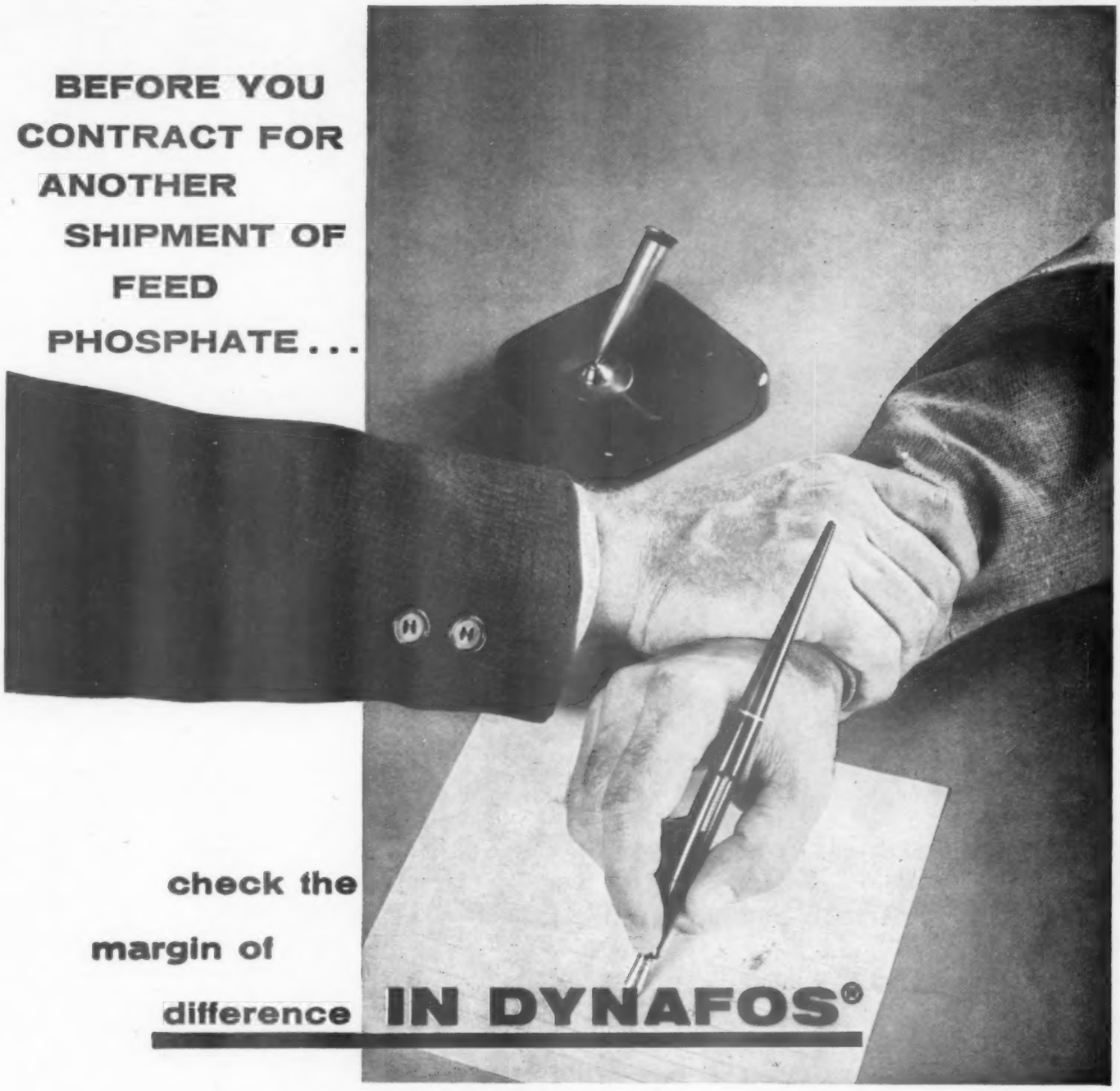

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1.08 LBS. OF 18.5% DICALCIUM PHOSPHATE
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1.54 LBS. OF 13% BONE MEAL
OR
2.04 LBS. OF 14% IMPORTED ROCK PHOSPHATE
OR
7.40 LBS. OF 9% COLLOIDAL PHOSPHATE
TO EQUAL THE BIOLOGICALLY AVAILABLE PHOSPHORUS IN ONE POUND OF DYNAFOS.

*As compared to beta tricalcium phosphate reference standard

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JOE BROOKS

BY AL P. NELSON

Curiosity Is a Good Sales Tool

When 45-year-old Herman Graf came in from the barn about 10:30 that morning for his mid-morning coffee and sweet roll, his plump wife, Gertrude, had the day's mail laid neatly on the small metal lunch table in the kitchen where Herman usually sat for coffee.

There were a couple of bills, a few magazines, a card from a retired farmer neighbor who was spending the winter in California. Then Herman, sipping the steaming coffee, picked up an envelope and frowned as he read the name in the corner—"Brooks-Gram."

"Hey," he said to his wife. "Is this from Joe Brooks? Brooks-Gram? Is the guy getting a little high hat on us?"

"I don't know," said his wife, pouring some coffee for herself and sitting down at the opposite end of the table. "Maybe it's another Brooks. Open the letter and see."

"There's something hard inside," Herman said, holding the letter up to the light. "It's not a half dollar. The paper is folded twice and I can't see well." He began tearing open the envelope, which had a 4¢ stamp on it.

"You won't catch Joe Brooks giving half dollars away," commented his wife. "I hear he owns bank stock. You don't own bank stock and throw your money away."

Herman opened the letter and began to read. "Well, I'll be darned!" he said. "I'll be gosh darned."

His wife pursed her lips. "Herman, what is it? I'm here, you know. You might tell me what this is all about."

Herman chuckled. "Joe sent us a key, Gertie."

"A key! What for? We don't need a key. Every lock we have has a key. I see to that. I don't want any burglar getting in."

"Oh, this is a different kind of key," Herman said, putting down the Brooks-Gram. "Read it yourself. It is printed up like a telegram, by heck."

He took another sweet roll, placed about 10¢ worth of butter on the underside and bit into the roll.

Gertrude read the letter. "Huh," she said finally. "Brooks invites us to come in and try this key to open a treasure chest. Herman, I wonder what's in that chest?"

"Prizes," said Herman, munching on his sweet roll. "Maybe a box of Copenhagen snuff, a package of Peerless chewing tobacco, a pair of work gloves, maybe even a jackknife or two. How do I know?"

"Nothing for women?" said his disappointed wife.

"Oh, I suppose," Herman said. "Joe isn't that foolish—to forget the women. Yep, there must be something in there for them."

Gertrude frowned. "Herman, you don't suppose that only one key will open the treasure chest in Joe's store?"

Herman blinked, as if this was a thought he had not considered. "Nope," he said finally. "Put yourself in Joe's place. How could he have just one key that would open that treasure chest? Too many farmers would be disappointed. There would be only one winner, and he'd cop everything. That wouldn't be good for Joe's public relatives or whatever they call that stuff."

Gertrude's eyes opened wide. "You—you mean, Herman, that maybe every one of these keys Joe sent out in his Brooks-Gram mailing will—will open the treasure chest?"

"I wouldn't be one bit surprised," Herman chuckled. "That means everybody gets some prizes, doesn't it? And when the chest gets empty Joe'll maybe just fill it up again—when customers aren't looking."

Gertrude looked it him, the muscles of her chubby arms tensing. "Oh, how can you be so smart?" she queried. "I can never think of the things you think of."

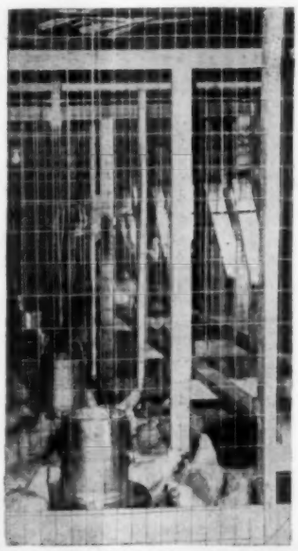
"Good thing you can't," Herman grinned. "You might be shocked. Well, I guess I'll go back to the barn."

"Herman! You mean you aren't going to do anything about that key?"

"Not right now. I have work to do.

(Continued on page 58)

384 PEDIGREE PENS!



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And none too soon! Our repeat business is growing. Our new customers, many of the biggest and best-known men in the industry, are using our male in large numbers. Other important broiler men are watching closely. Our obligation to increase production has never been greater. Besides the new pedigree pens many new laying houses have gone up in Decatur; new hatchery capacity has been added. Our research program to improve our three basic lines has been expanded. Our progeny testing program has grown as fast as our sales.

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Your Brand Pig Feeds will enjoy a new surge of interest from feeders who are always looking for the latest nutritional advancements for their hog operations. A NEW BOOST from PIG Y-Z can supply the extra selling power that will rocket your hog feed tonnage up where it belongs.

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ELANCO REPORT TO THE FEED INDUSTRY

Now...Hygromix

new in-feed way to control large roundworms, cecal worms, intestinal capillaria worms in poultry

Hygromix kills worms of all ages and sizes. Stops them from producing eggs. Controls worm infections in laying, broiler, replacement flocks. Helps increase feed efficiency, improve flock health.

Hygromix, a new concept in worm control, was first introduced to the feed industry four years ago. At that time, additional research was being conducted to determine if the active component of Hygromix (Hygromycin B) would be useful for control of worms in all classes of livestock or poultry.

The result: Hygromix for poultry.

Hygromix kills and controls three important worm parasites of chickens . . . safely, automatically.

HYGROMIX . . . ONLY METHOD WHICH STOPS WORM EGG PRODUCTION

Hygromix breaks the life cycle of roundworms, cecal worms, and capillaria worms. Besides killing the adult worm before it has a chance to inflict heavy internal damage, Hygromix also stops worm egg production and reduces the total number of worm eggs that would otherwise infest all poultry premises. The cecal worm egg, for example, can survive for a period of eight months in the soil under natural climatic conditions.

Now, Hygromix for poultry opens up another important service and selling opportunity for feed manufacturers. It is the first, and only, worm-control method which is effective both as a preventive and a cure.

LET'S LOOK AT THE ACTUAL DAMAGE CAUSED BY THESE THREE PARASITES

Briefly, the cecal worm causes general unthriftiness, and in young birds death may result from heavy infection. The cecal worm is also the carrier of blackhead disease. Capillaria worms cause unthriftiness, weakness, loss of weight, and loss of egg production in layers. Large roundworms retard growth of young birds and lower production of laying flocks.

Just how much "dollar damage" is done by worms directly or indirectly, no one seems to know—but Drs. Card, Barger, and Pomeroy, noted poultry scientists, state: "Diseases and parasites continue to exact an annual toll from the poultry industry which has been estimated at more than $250,000,000." (Source: Fifth Edition, "Diseases and Parasites of Poultry.")

The very nature of the poultry industry today has opened the door for even heavier losses. It is an economic necessity for the poultryman to raise large numbers of birds in close, confined areas—and these crowded conditions provide ideal environments for worm eggs, infection, reinfection.

Hygromix helps to lick this problem by providing continuous, automatic worm control during its recommended feeding period.

ADVANTAGES OF HYGROMIX TO POULTRYMEN

Many of the benefits of using feeds with Hygromix are the same for egg producers, replacement growers and broiler operators. This list gives you the complete story at a glance.

HYGROMIX FOR POULTRY:

- helps to improve feed efficiency
- provides way to keep litter free of worm eggs
- safe, economical, easy to use
- birds stay on feed—there's no setback or shock
- helps to prevent blackhead disease by killing and controlling its main carrier, the cecal worm
- big aid to sanitation—lessens chance of next brood being infected—birds are free of worms when ready for laying house
- keeps birds on range free of worms
- helps remove stress conditions and improves flock health.

Commercial poultrymen are concentrating their efforts more and more on sound management and sanitation methods to increase feed efficiency and lower costs of production. Hygromix will help them do this.

ADVANTAGES OF HYGROMIX TO FEED MANUFACTURERS

Volume, volume, more volume seems to be the answer for poultrymen to make a profit today. With this volume, the risk of worm damage, infectious diseases, and the resulting losses becomes that much greater. Up to now, little could be done to solve the poultry-parasite problem.

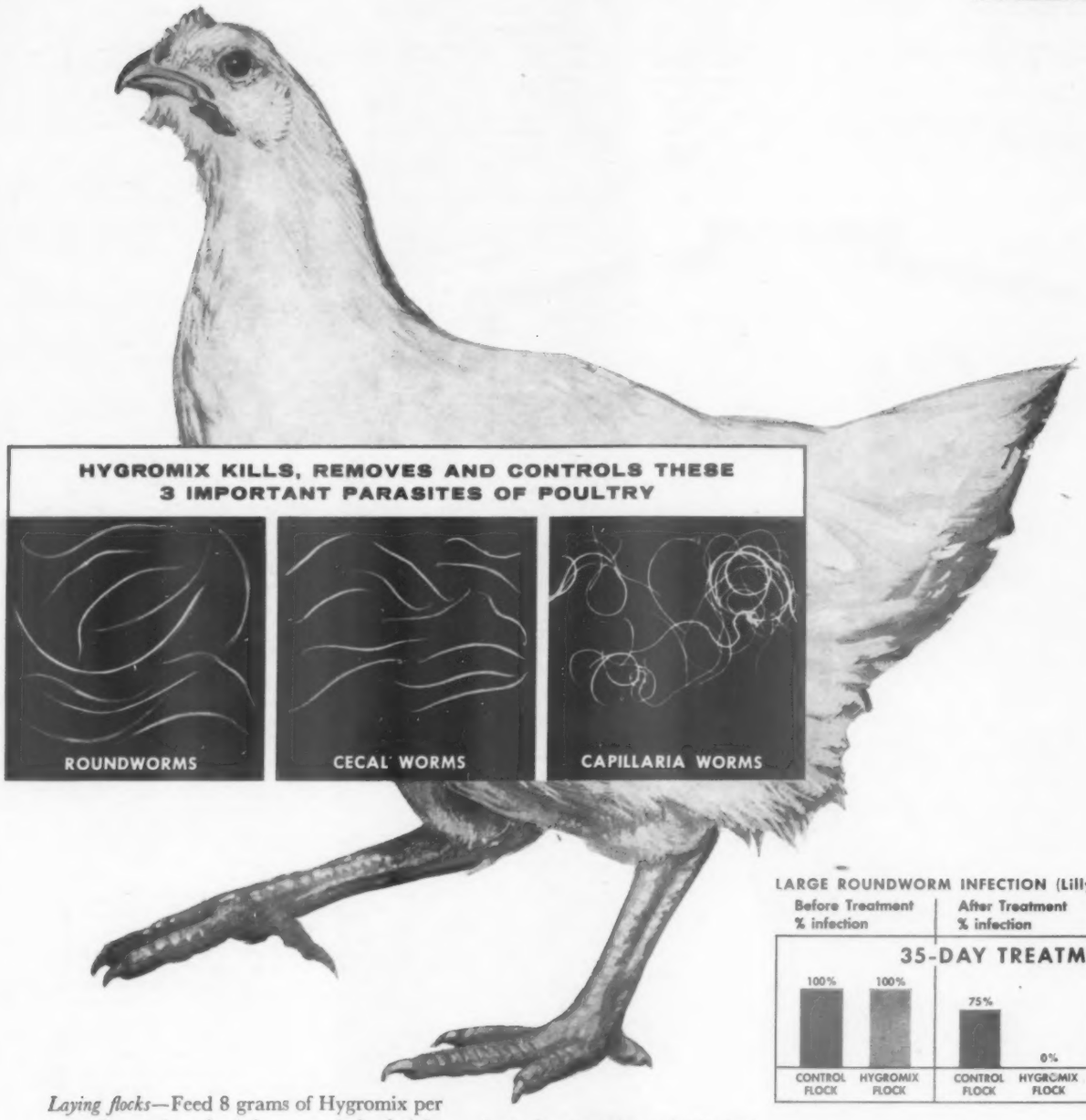
Now, Hygromix not only kills and removes the three most important parasites of poultry but actually breaks the life cycle of these worms—*greatly reduces chances for reinfection.* Now, you can offer poultrymen a brand-new tool to help them increase feed efficiency and lower cost of production.

With Hygromix, your sales and dealer organization can offer commercial poultrymen this newest advance in poultry feeding and build poultry-feed tonnage.

Hygromix is a finely divided and free-flowing premix, designed for accurate and efficient mixing by the feed manufacturer into his complete poultry rations. Hygromix may also be included in your poultry concentrates that are mixed with grain.

HOW TO USE FEEDS WITH HYGROMIX TO PROTECT POULTRY AGAINST WORM DAMAGE

Replacement flocks—Feed 8 grams of Hygromix per ton of complete feed for a period of eight weeks prior to placing birds in clean laying house. Repeat if necessary.



Laying flocks—Feed 8 grams of Hygromix per ton of complete feed for a period of eight weeks. Repeat if necessary.

Broilers—Feed 8 grams of Hygromix per ton of complete feed for the first eight weeks.

HOW TO QUALIFY

Elanco Products Company is now ready to help you comply with regulations covering the use of Hygromix in your poultry feeds. For instructions, write Elanco Products Company . . . or see your Elanco Representative. The benefits of Hygromix will be explained to poultrymen in the coming months. Act now and be ready.

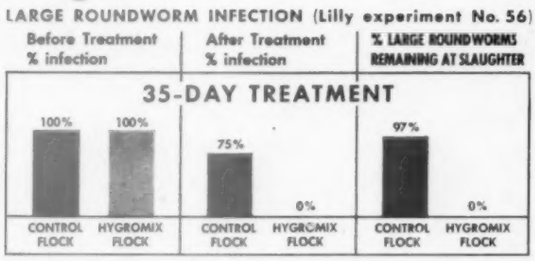
* * *

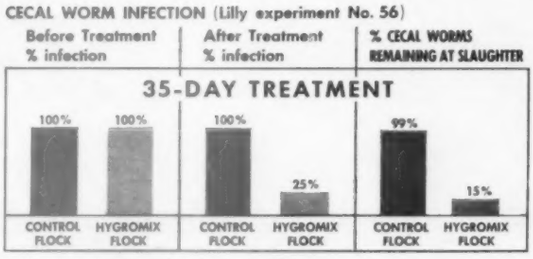
Only proved facts about Hygromix are presented on these pages. Tests are still being conducted at many research centers and preliminary findings indicate that Hygromix will provide benefits beyond those already proved.

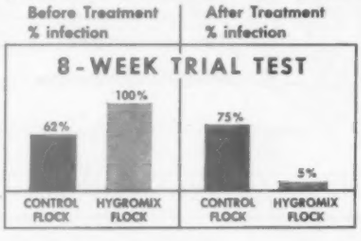
These additional benefits will be reported in trade journals and farm magazines as soon as they are thoroughly proved and tested under practical farm conditions.

Results of worm-control tests at Lilly Research Center: These charts show how feed with Hygromix quickly reduced the number of roundworms and cecal worms, as well as killing the worms. In these experiments, birds with known worm infestation were split into two comparable groups. The control flock received a high-quality poultry ration. The test flock received the same ration with Hygromix. Daily worm counts in the manure were made and recorded during the 35-day test. At the end of the test, all birds were slaughtered and complete worm counts performed. These are shown by "percentage of worms remaining at slaughter."

Results of worm-control test by Dr. M. N. Frazier, Extension Veterinarian, Poultry Department of Animal Disease, University of Connecticut, Storrs, Connecticut: This chart shows how feed with Hygromix quickly reduced the number of capillaria worms, as well as killing them. In this experiment, a total of 1,970 White Leghorns were fed Hygromix mixed in the mash at the rate of 8 grams per ton for a period of 8 weeks; 793 White Leghorns served as controls. One percent of each lot was slaughtered every two weeks throughout the trial and the presence of capillaria worms was recorded.







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I'll think about the key later."

Gertrude shifted her eyes. "Herman, could you make your own lunch while I run into town and do some shopping?"

Now it was Herman's turn to stop and stare at his wife. "And you mean go over to Brooks and try that key?"

"Well, as long as I'm in town shopping. . ."

Herman shook his head. "Don't try to talk me into going to town, too. I know you can't rest until you try that key. But watch yourself. Maybe when you open that treasure chest you'll see it full of skimpy black nightgowns and things like that."

Gertrude's back straightened. "Herman Graf," she said. "Don't get vulgar. That's the one thing I don't like about you. You, you sometimes don't have any sense of decency."

"Well, don't say I didn't warn you," Herman said slyly.

"Joe Brooks wouldn't dare do that," said Gertrude. "I'm going into town, and I'll stop on the way and pick up Mrs. Anderson to go with me. The two of us will be together when I try our key on the treasure chest."

"Go ahead," said Herman cheerfully. "I'll just stay home and farm and try to make some money."

"You mean," said his wife, "that I don't help . . ." She broke off.

"Sure you help," Herman said. "Now and then. Except when you are out lookin' for bargains."

With a snap, Gertrude tore the key from the Brooks-Gram and went into her bedroom. She came out a few minutes later, all dressed up, went into the garage and took the light truck. Herman peered out the window at her.

"Man, that Brooks must know women. They'll go 50 miles to get a bargain, or get something for nothing. I'd just better phone Joe and let him know Gertrude is comin'. Joe sure would lose some hair if all he's got in that treasure chesk is Copenhagen snuff and Peerless chewing tobacco. I might as well order some more hog feed while I have Joe on the line."

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Oui, c'est magnifique how clean they are. Each car has le kraft paper pour le grand protection. Le Shellbuilder est pure crushed reef oyster shell, washed in purified water, and sterilized for the health of your flocks. Shellbuilder est economique. It arrives in parfait condition at your store — and in clean cars. Order a car today — tout de suite.

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FAO Nutrition Event Told Benefits of Fish Protein Use

WASHINGTON—More and better beef steak as a result of fish protein supplement in the diet of cattle is a distinct possibility, according to speakers at the International Conference on Fish in Nutrition of the Food and Agriculture Organization of the United Nations here.

Two sessions dealt with the use of fish and fishery products in the field of animal nutrition. It was reported that while most of the topics were related to enhancing the world's protein supply via feeding fishery products to cattle, poultry and swine, the use of fish products in mink feeding was also covered.

Talks ranging from subjects as widely separated as the "binding of the amino acid lysine in herring press cake in England to the excellent results of the anchovy-sweet potato diet for Peruvian hogs" stressed two things—that fishery products can make a big contribution to the land-based animal protein supply and that there are many things which are still unknown about the best use of fishery products in animal feeding.

FAO reported that there was a considerable interest in statements indicating that a fish protein supplement to the rough vegetable diet of cattle "aided materially in the digestive process, and that there was a distinct increase in the rate of growth and in the addition of poundage."

Plans are for more study on why this occurs and the effect of fish protein supplement on milk production, FAO reported.

MILL NEAR COMPLETION

UPPER SANDUSKY, OHIO — A new feed mill is near completion to replace one which was destroyed by fire at Upper Sandusky, according to Joe King, manager of the U.S. Commission Co. The new mill will be constructed of metal and concrete, and will be at the same location as the one which was destroyed.

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Japanese Visitors Tour Nutrena Farm

MINNEAPOLIS — Production systems for livestock and poultry were the center of keen interest for a six-man Japanese feed grain mission which toured the Cargill-Nutrena Research Farm at Elk River, Minn.

The group, on a month-long swing through the U.S., spent an afternoon looking over the experimental facilities at the farm and getting answers to questions from Dr. Cloy Knodt research farm director.

Dr. Knodt explained to the group that research at the farm not only includes feeds and feeding programs, but also buildings and equipment, management methods and marketing of end products. Farmers, he said, need help in such things as choosing strains of poultry, vaccination and other health measures. Thus, a "systems research" concept governs experimental activities at the farm.

Controlled Lighting

The visitors were shown flocks of layers on [illegible] tests ("stimulighting"), which Dr. Knodt said have shown increased profits of [illegible] per bird annually. They also were told of outstanding results obtained by the Coccivac vaccination method of combatting coccidiosis. Some 41,000 birds have been vaccinated at the farm, and none have shown coccidiosis symptoms in up to 24 months time, Dr. Knodt said. Before the vaccination program was started, extensive losses from the disease had occurred at the farm.

The visitors showed considerable interest in this information [illegible] coccidiosis [illegible] in Japan.

The tour also included inspection of the Pigloo system for swine in which sows are placed in isolation in individual huts before farrowing. Comparisons with central farrowing systems, also at the farm, show that the Pigloo method reduces diseases, losses and labor costs, Dr. Knodt said.

Sponsored by the U.S. Feed Grains Council, the U.S. tour helped acquaint the Japanese agricultural leaders with grain production and marketing, feed manufacturing, nutrition and disease research and feeding in several stops across the country.

(THIS ARTICLE APPEARED IN FEEDSTUFFS, OCT. 29, 1960)

Nutrena Mills Inc. has used and recommended the COCCIVAC—Trithiadol® program since 1958.

They also were told of outstanding results obtained by the Coccivac vaccination method of combatting coccidiosis. Some 41,000 birds have been vaccinated at the farm, and none have shown coccidiosis symptoms in up to 24 months time, Dr. Knodt said. Before the vaccination program was started, extensive losses from the disease had occurred at the farm.

The CocciVac® program works for Nutrena

It can work for you

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NEW!

Single drop applicator for oral vaccination with COCCIVAC provides easy method for safe, sure, lasting protection from coxy. Free sample applicator on request.

COCCIVAC Type 4 is available for broilers. Types A and B for layers and roasters—and for broilers in heavy exposure areas.

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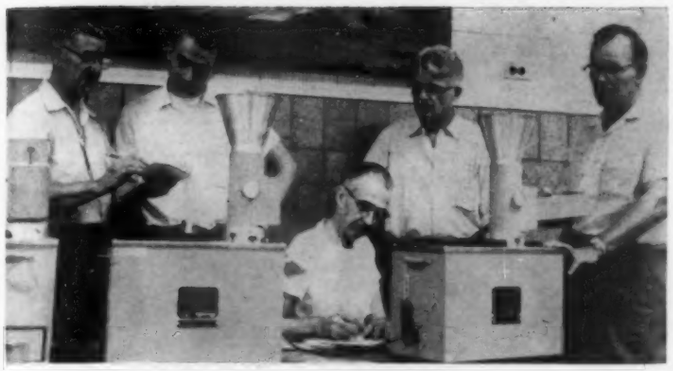

CHECK MOISTURE TESTERS—This is a photo of one of five meetings in Indiana at which Steinlite moisture testers were checked for accuracy. Three hundred of the testers were examined. At left in the picture is Fred K. Sale, executive secretary of the Indiana Grain & Feed Dealears Assn. Association members cooperated in the testing program.

Moisture Testers Checked in Indiana

INDIANAPOLIS — Approximately 300 Steinlite grain moisture testers were checked at a series of five meetings in Indiana, the first time such a service has been made available in this manner.

Fred K. Sale, executive secretary of the Indiana Grain & Feed Dealers Assn., said the tests on machines used by country elevators were a "great success." Mr. Sale conceived the idea, and it was accepted by Seedburo Equipment Co., Chicago, exclusive distributor of Steinlites to the grain and feed industry.

Seedburo provided two representatives to do the testing, and the association and the Indiana Farm Bureau furnished two or three men at each site to assist in setting up the tests and tabulating results.

A typical test day started at 7 a.m. and ran through 7 p.m. In some locations, more than 80 testers were examined during the day.

Steinlites brought in varied as to age and length of service since last calibrated. Units which did not meet standards received a recommendation that the owner secure a unit on loan and have his unit checked and calibrated at the Steinlite laboratories. This was merely a suggestion, however, and any action on the owner's part was voluntary.

Mr. Sale reported the meetings were "one of the most important services I think we have ever provided. One thing that was quite apparent to me is that these electric moisture testers, regardless of make, should be factory checked about every two years, and certainly the third year."

Similar meetings are now being arranged in other states by Seedburo. More information can be obtained from Rex Yocum, president, Seedburo Equipment Co., 618 W. Jackson Blvd., Chicago 6, Ill.

Banker's Wife Wins At Cotton Bag Sewing

MEMPHIS—The wife of the president of the First National Bank, Itasca, Texas, took first place honors in the National Cotton Bag Sewing Contest here.

Mrs. Ocie Williamson salvaged some chicken feed bags, sewed them together and added a tuck or two here and a bit of cotton lace there. She came up with a summer dress, a ringer for Italian linen, and with it won a trip for two to New York City.

She was the West Texas State Fair's first place entry and was among those from 41 regional and state fairs in the U.S.

Second place went to Mrs. Warren Rainwater, a farmer's wife from Sallisaw, Okla., who made the final round for the third time in her 10 years of sewing sacks together.

The contest was sponsored by the National Cotton Council, which has its headquarters here.

These birds are telling something about minerals

YOU SHOULD KNOW

No on-farm chickens will ever enjoy their diets! The feed for most of these birds contains abnormal amounts of one of the trace elements. In this and other similar experiments the effects of several different levels of an element are compared. In one test we subjected a group of young birds to a feed containing 1,125 times as much iron as is normally added to a feed! These trials at the Lime Crest Research Laboratory tell us about the tolerance of chickens for the trace elements in Lime Crest Trace Mineral Pre-Mixes. They also tell us about their tolerance for the various compounds of these elements. Our iron experiment, for example, demonstrated conclusively that in a formula feed ferrous carbonate is preferable to either ferrous gluconate or ferrous sulphate. Careful research like this assures you that the compounds in Lime Crest Trace Mineral Pre-Mixes are not only effective sources of the mineral elements but completely safe at levels 100 times as great as the levels recommended for your finished feeds. You can also be sure of Lime Crest performance in your mill . . . because of a special process, exclusive with Lime Crest, our Trace Mineral Pre-Mixes are guaranteed to flow freely and never cake. It costs so little per ton to add the advantages of Lime Crest Pre-Mixes to your feeds, why not look into it today. Write for our new illustrated folder and price list.

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Abstracts from Abroad

By Dr. Rudolph Seiden

Minerals and Ketosis

P. S. Blackburn et al., of the British Hannah Dairy Research Institute (Bvj. 158), fed to each of 17 Ayrshire cows with an average of 5.4 lactations a ration of 30 lb. grass silage, 20 lb. fodder-beet and 9 lb. dried grass daily for 3½ months, starting 3 weeks before calving.

One group of these cows received, additionally, a high mineral concentrate, the other group a low mineral concentrate. The concentrates were fed at the rate of 4 lb. per 10 lb. of milk. There were six cases of ketosis in the high mineral concentrate group and eight cases in the other group. Milk yields, live-weight changes and clinical symptoms were also very similar in both groups of cows.

It was concluded that not the mineral composition of the diet, but some other factor, as yet unknown, was responsible for the high incidence of ketosis in the cows.

◆

Ewe, Lamb Feeding

The nutritional level greatly influences the weight and wool production of lambs and sheep. P. G. Schinckel and B. T. Short of the Ian Clumies Rosa Animal Research Laboratory in New South Wales (Bms. 41347) compared high and low feed-intake groups. Lambs from ewes that received low feed levels during pregnancy were 34% smaller at birth and 9% smaller at 4 months of age than the lambs from ewes on high-intake levels. When adult, the former produced 8.5% less wool than the latter.

On the other hand, for the young lambs—from birth to 4 months of age—low levels of feed intake resulted in slower growth rate and a reduction of about 10% later on in mature body weight. Also interesting is that the post-natal low-intake group produced approximately 12% less wool as adults, primarily because of 10.5% smaller fiber weight (without reduction of the number of wool follicles). Thus, the level of both pre- and post-natal feed intakes are of great practical importance to the sheep producer.

◆

Effect of Glaubers' Salt

The daily addition of 30 gm. (1 oz.) of Glaubers' salt (Na_2SO_4) per cow to the commercial feed given her for 10 days caused the fat content of the milk to increase between 0.07 and 0.38% over that of the controls, report the Russian investigators, F. Palfi and J. Nakonetshnaja (Luf. 226).

They also found that the fat content remained unchanged when the treated animals received pasture instead of commercial feeds. However, for the controls, when on pasture, the fat content of the milk fell 0.2-0.3%. Similar were the results when Na_2SO_4 was added to corn silage.

◆

Russian Books Described

A good textbook used in agricultural colleges in the USSR has been translated into German. It's I. S. Popow's "Ernaehrung landwirtschaftlicher Nutztiere" (available from VEB Deutscher Landwirtschaftverlag, Berlin N. 4: 612 pp., 42 Ill.; D. M. 26.50, approximately $6.60).

It discusses the influence of feeding on the animal organism and the microbiological processes occurring in the gastrointestinal canal of ruminants, emphasizes the importance of vitamins, trace elements and antibiotics for the nutrition of farm animals and poultry, and gives much space to description of the nutritional values of a great variety of feedstuffs.

Two major sections of the book are concerned with ration feeding of the various species of animals kept for breeding, working, meat, milk or egg production.

◆

Iodine-Algae as Feed

In the Black Sea grows the red alga Phyllophora nervosa. It is used in Russia as source material for iodine production.

After boiled and fed at the rate of 1 kg. (2.2 lb.) daily to swine, the animal nutritionists J. F. Bondare and V. A. Gurtich (Luf. 472) found that the weight gain after one month was 12% higher than that of the controls. Even better results were obtained when the waste product of the iodine plant was used as feed supplement for young pigs at the same daily 1-kg. level over a period of 43 days.

The waste material contained (much less) iodine and 23% proteins. The treated pigs gained 17% more weight than the control animals.

◆

Cobalt, Protein for Sheep

Like Australia, Russia is doing much sheep research work.

P. N. Korshakov reports (Luf. 369) that sheep are particularly sensitive to cobalt deficiency of feed. After giving each animal in a group of nine 2.5 mg. of cobalt chloride daily, from January until May, the yield on wool was 1,482 gm. (1,000 gm.= 2.2 lb.) against only 1,252 gm. of the control group of the same size.

To supply sufficient cobalt, it is recommended to feed sheep a mixed silage of 2-3 parts corn and 1 part of sorghum which allows for a sufficiently high cobalt intake. It was determined that sheep should obtain 0.92 mg. cobalt per kg. (or approximately 1 grain per 70 lb.) of dry substance of the silage.

In another experiment, O. S. Karpova and N. F. Matveeva (Luf. 389) found that there exists a direct-proportional relationship between the sulfur content of feedstuffs and that of wool. Also, it was found that the sulfur influences beneficially the animal system's uptake of nitrogen.

The yield and also some of the physical properties of the wool depend primarily on the protein level of the ration and its content of cystine (sulfur-containing amino acid). The cystine content is said to be high in Russian sunflowers and clover.

◆

Milk Production, Fertility

The fertility of dairy cows may be impaired when they maintain a level of milk production in excess of that provided for by the production ration, calculated the British expert, H. S. McTaggart (Vr. 801).

He studied a herd of high-yielding Ayrshire cows kept on good summer pasture. Although phosphorus is commonly considered to be an important factor in the maintenance of optimum fertility, it was determined that the starch equivalent of good summer grazing is just as inadequate for high-yielding cows as is its phosphorus content, and this may be an important factor in causing lowered fertility (i.e., increase in the number of services for conception, abnormally long intervals between repeat services, and abortion).

Adequate supplementary feeding in terms of both starch equivalent and phosphorus during the grazing period might improve fertility of high-yielding cows and increase milk yield in others.

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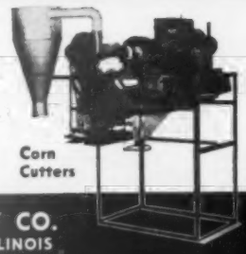
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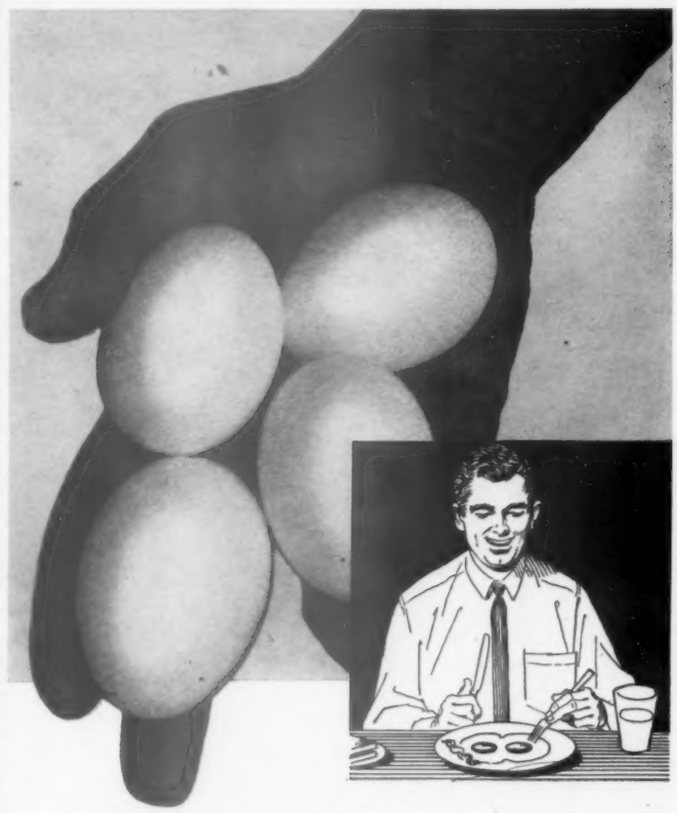

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Hogs fed rations with Taomyxin averaged:

- 8 days less feeding time to market
- at $34.20 less cost per 100 hogs over other antibiotics tested

Just by changing the antibiotic in your swine feeds to Taomyxin, you can help your customers save money consistently . . . more reason than ever for them to switch to your program.

Taomyxin has proved it can produce more gains at less cost than any other antibiotic used alone, or any combination of antibiotics tested. Test averages show 8 days less feeding time and $34.20 less cost per 100 hogs.

you're using, it will pay to Taomyxin*™...

Here's how much better Taomyxin proved out:

	More Gains from Taomyxin by:	Better Feed Efficiency from Taomyxin by:
Zinc Bacitracin	13.4%	7.3%
Bacitracin plus Penicillin	12.8%	5.7%
Penicillin plus Streptomycin	3.0%	3.4%
Penicillin plus Streptomycin plus Bacitracin	6.4%	1.6%
Chlortetracycline plus Penicillin plus Bacitracin	6.5%	1.2%

Testing by Pfizer, the feed industry, colleges, and on many hog farms has shown the recommended level of Taomyxin to be 2 grams of oleandomycin to 8 grams of oxytetracycline wherever increased performance is of prime importance.

During periods of high disease risk, the product of choice is still Terramycin** alone at high levels—it's the proven superior disease-fighting antibiotic.

Call your Pfizer representative for complete details on supplementing your rations with new Taomyxin.

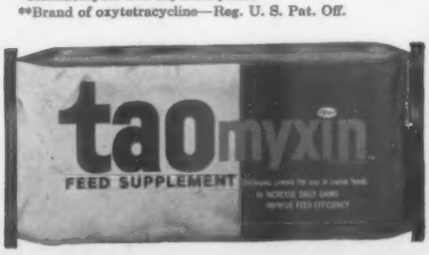
Taomyxin requires a supplemental N. D. A. Have you filed yours? If not, do it now.

The following summary shows the average of test results comparing Taomyxin with antibiotics used alone or in combination:

	Control†	Taomyxin
GROWTH		
Number of trials	12	12
Number of pigs	694	669
Av. daily gain—lbs.	1.38	1.48
Increase over controls—%	—	7.25%
FEED EFFICIENCY		
Number of trials	12	12
Number of pigs	694	669
Lb. feed/lb. gain	3.70	3.62
Improvement—%	—	2.20%
ECONOMICS††		
Cost per cwt. gain	$11.951	$11.761
Savings per cwt. gain	—	.190
Savings per pig (180 lbs. gain)	—	.342
Savings per 100 pigs	—	$34.20

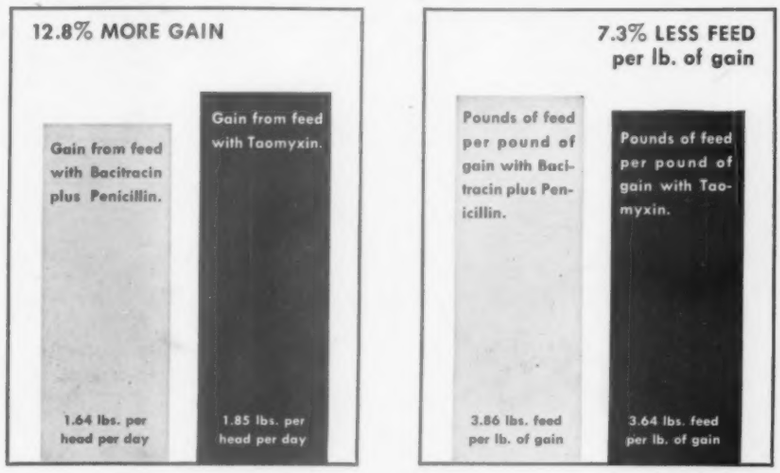
†Other antibiotics and combinations of antibiotics.
††Cost of antibiotic supplements included.

*Oleandomycin and oxytetracycline
**Brand of oxytetracycline—Reg. U. S. Pat. Off.



Using Bacitracin plus Penicillin?

See how a switch to TAOmyxin can produce more gains at less cost.


12.8% MORE GAIN
Gain from feed with Bacitracin plus Penicillin.
1.64 lbs. per head per day
Gain from feed with Taomyxin.
1.85 lbs. per head per day
7.3% LESS FEED per lb. of gain
Pounds of feed per pound of gain with Bacitracin plus Penicillin.
3.86 lbs. feed per lb. of gain
Pounds of feed per pound of gain with Taomyxin.
3.64 lbs. feed per lb. of gain

Taomyxin produced 21 lbs. more gain per day per 100 pigs . . . on 22 lbs. less feed per 100 lbs. gain

For this trial, a regular, high-quality swine feed was used. Taomyxin was added to part of the feed, bacitracin and penicillin to the rest . . . and the performance of the different rations was compared.

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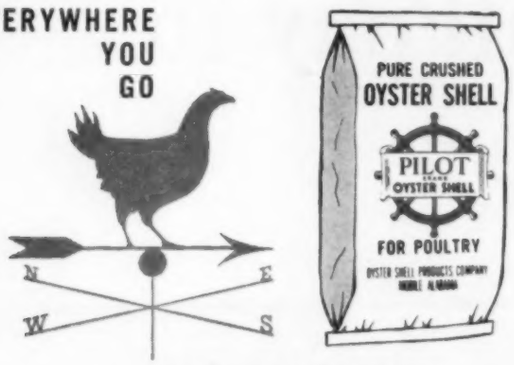

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Convention Calendar

New Listings

For the convenience of readers who scan the Convention Calendar regularly for new listings, those added to the columns in the current week appear separately from ones which have been entered previously. The following week they will be moved to their proper slot where they will remain until the event is held.

Dec. 11-15—Stockmen's Short Course; Washington State University, Pullman; Dr. M. E. Ensminger, chm., Animal Science Dept.

1962

Jan. 4-5—Minnesota Poultry Hatchery Assn.; Radisson Hotel, Minneapolis, Minn.; sec., L. L. Baumgartner, Litchfield, Minn.

Nov. 13-14—Washington Animal Industry Conference; Skagit Valley College, Mount Vernon, Wash.; John G. Wilson, mgr., Washington State Feed Assn., Inc., 814 Second Ave. Bldg., Seattle 4.

Nov. 14-15—Poultry Servicemen's Clinic; Cornell University, Ithaca, N.Y.; C. E. Ostrander, Poultry Husbandry Dept., 206 Rice Hall.

Nov. 15-17—Second Conference on Stored Grain Insects and Their Control; Kansas State University, Manhattan, Kansas; chm., Prof. D. A. Wilbur, Entomology Dept.

Nov. 16-17—Kentucky Beef Cattle Short Course; Kentucky Dam Village Park, Gilbertsville, Ky.; George D. Pendergrass, Animal Husbandry Dept., University of Kentucky, Lexington.

Nov. 16-19—Florida Nutrition Conference; Grand Bahama Hotel, West End, Grand Bahama Island; chm., Dr. J. P. Feaster, Animal Husbandry and Nutrition Dept., University of Florida, Gainesville.

Nov. 17—Nebraska Feed and Nutrition Conference; University of Nebraska, Lincoln; Dr. P. L. Kelly, chm., Dairy Husbandry Dept.

Nov. 17-18—Tennessee Feed Manufacturers Assn.; Holiday Inn of America, 960 S. 3rd, Memphis, Tenn.; sec., C. H. Warfield, 200 American Trust Bldg., Nashville, Tenn.

Nov. 19-21—Western Grain & Feed Assn. of Iowa; Fort Des Moines Hotel, Des Moines, Iowa; sec., Bob Skinner, 401 Shops Bldg., Des Moines 9.

Nov. 30-Dec. 1—Dealers Nutrition Conference; University of Nebraska, Lincoln; Dr. P. L. Kelly, chm., Dairy Husbandry Dept.

Dec. 5-6—North Dakota Turkey Convention; Civic Center Auditorium, Fargo; sec., North Dakota Turkey Federation, Irving J. Mork, Box 2408, State University Station, Fargo.

Dec. 6-7—Missouri Poultry and American Poultry & Hatchery Federation Midwest Quickie Convention; Hotel Continental, Kansas City, Mo.; sec., Missouri Poultry Improvement Assn., E. M. Funk, Box 568, Columbia, Mo.

Dec. 7-8—Michigan Feed & Grain Dealers Assn.; Pantlind Hotel, Grand Rapids, Mich.; sec., Nevels Pearson, Box 472, East Lansing.

Dec. 7-8—North Carolina Animal Nutrition Conference; North Carolina State College, Raleigh; chm., Dr. G. H. Wise, Animal Nutrition Section, Animal Industry Dept.

Dec. 8—Illinois Sheep Day; University of Illinois, Urbana; U.S. Garrigus, Animal Science Dept.

Dec. 13—American Society of Agricultural Engineers; Palmer House, Chicago; grain storage and feed processing session, cooperative program sponsored by ASAE and Grain Processing Machinery Manufacturers Assn.; sec., GPMMA, John Wessman, 400 W. Dartmouth Rd., Kansas City 13, Mo.

1962

Jan. 8-9—Kansas Formula Feed Conference; Kansas State University, Manhattan; chm., Prof. T. B. Avery, Poultry Science Dept., West Waters Hall.

Jan. 9-11—National Turkey Federation; Memorial Auditorium, Dallas, Texas; co-headquarters hotels, Baker and Adolphus; sec., M. C. Small, Box 69, Mount Morris, Ill.

Jan. 21-23—Indiana Grain & Feed Dealers Assn.; Claypool Hotel, Indianapolis; sec., Fred K. Sale, 600 Board of Trade Bldg., Indianapolis 4.

Jan. 21-24—Farmers Grain Dealers Association of North Dakota; Civic Memorial Auditorium, Fargo; sec., Lloyd C. Hanson, 513 Black Bldg., Fargo.

Jan. 23-27—New Jersey Farmers Week and Farm Show (Jan. 23-25); Trenton Armory; sec., Phillip Alampi,

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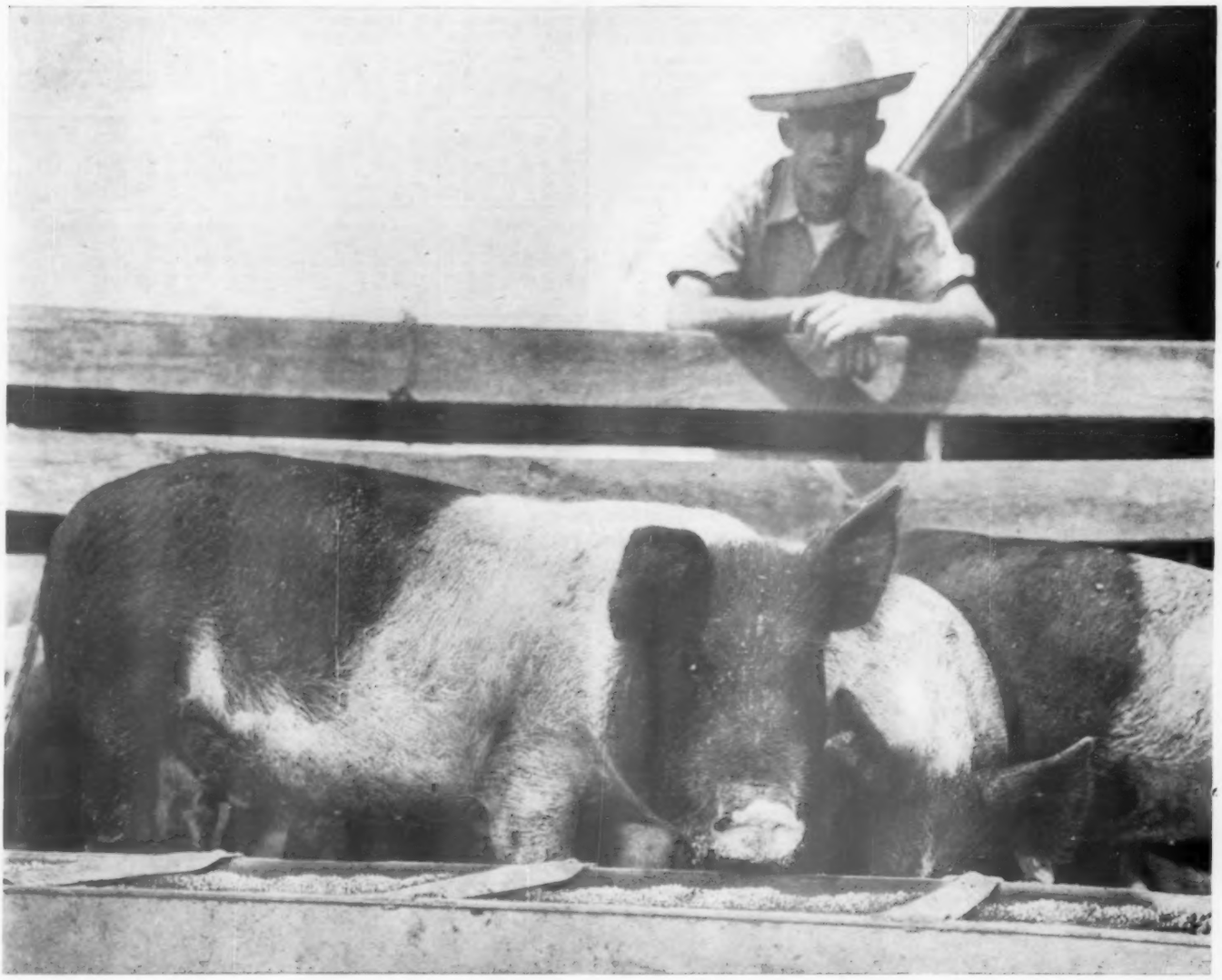

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"Most hogs that might be called normal and healthy experience a 7 to 10% feed loss in nourishing worms of various kinds . . . in spite of being treated for worms once, or even twice, with purge-type wormers."

DR. A. C. TODD
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*Complete test data sent upon request.

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Jan. 28-30—Midwest Feed Manufacturers Assn.; Shamrock - Hilton Hotel, Houston, Texas; exec. vice pres., Lloyd Larson, 20 W. 9th St. Bldg., Kansas City, Mo.

Jan. 29-31 — Southeastern Poultry & Egg Assn.; Municipal Auditorium, Atlanta, Ga.; sec., Harold E. Ford, 235 E. Ponce de Leon Ave., Decatur, Ga.

Jan. 30-31—Illinois Agricultural Industries Forum; University of Illinois, Urbana, Ill.

Jan. 31—Louisiana Livestock Producers Day; Louisiana State University, Baton Rouge 3; chm., Dr. A. M. Mullins, Animal Industry Dept.

Jan. 31-Feb. 1 — Illinois Nutrition Conference; University of Illinois, Urbana; chm., Dr. Carl L. Davis, Dairy Science Dept.

Jan. 31 - Feb. 1 — New Hampshire Poultry Health Conference; University of New Hampshire, Durham; Richard Warren, Poultry Science Dept.

Feb. 1—Missouri Turkey Day; University of Missouri, Columbia; sec., Missouri Poultry Improvement Assn.,

Feb. 2-3—Minnesota Turkey Growers Assn.; Leamington Hotel, Minneapolis; sec., Roy C. Munson, 2200 University Ave., St. Paul 14, Minn.
E. M. Funk, Box 568, Columbia.

Feb. 1-2—Oregon Animal Industry Conference; Oregon State University, Corvallis, Ore.; co-sponsored by the Oregon Feed & Seed Dealers Assn. and Oregon State University; chm., Bill Eggimann, Dairy Cooperative Assn., 2613 S.E. 8th Ave., Portland.

Feb. 4-6—Wyoming Grain, Feed & Seed Dealers Assn.; Townsend Hotel, Casper, Wyo.; sec., Everett L. Berry, Box 118, Sheridan, Wyo.

Feb. 5-7—Association of Southern Agricultural Workers; Jacksonville, Fla.

Feb. 7-9 — American Dehydrators Assn.; Stardust Hotel, Las Vegas, Nev.; Joseph Chrisman, 430 Board of Trade Bldg., Kansas City 5, Mo.

Feb. 9-11 — Poultry Fact Finding Conference; sponsored by Institute of American Poultry Industries; Municipal Auditorium, Kansas City, Mo.; pres., Harold M. Williams, 67 E. Madison, Chicago 2, Ill.

Feb. 12 - 13 — Montana Nutrition Conference; Montana State College, Bozeman; chm., Dr. O. O. Thomas, Animal Industry and Range Management Dept.

Feb. 14-15—Pacific Northwest Feed Mill Production School; Benjamin Franklin Hotel, Seattle; sponsored by Washington State Feed Assn.; mgr., John G. Wilson, 814 Second Ave. Bldg., Seattle 4.

Feb. 15-16 — Utah Feed Manufacturers & Dealers Assn. Annual Nutrition Conference and Meeting; The Newhouse Hotel, Salt Lake City; sec., Dr. Lawrence Morris, Brigham Young University, Provo.

Feb. 16 — Washington State Feed Assn. annual convention; Benjamin Franklin Hotel, Seattle; mgr., John G. Wilson, 814 Second Ave. Bldg., Seattle 4.

Feb. 18-20 — Ohio Grain & Feed Dealers Assn.; Commodore Perry Hotel, Toledo; sec., George G. Greenleaf, P.O. Box 151, Worthington.

Feb. 20 - 21 — Virginia State Feed Convention and Nutrition Conference; Hotel Roanoke, Roanoke, Va.; sec., Virginia State Feed Assn., J. Paul Williams, 615 E. Franklin St., Richmond 19, or Prof. Paul M. Reaves, Dairy Science Dept., Virginia Polytechnic Institute, Blacksburg.

Feb. 26 - March 1 — Colorado Livestock Days; Colorado State University, Fort Collins; chm., Dr. C. D. Story, head, Animal Science Dept.

March 2-3—Oklahoma Feed Industry Conference and Work Shop; Oklahoma State University, Stillwater; Dr. Rollin H. Thayer, chm., Poultry Science Dept.

March 4-6—Nebraska Grain & Feed Dealers Assn.; The Cornhusker Hotel, Lincoln; sec., Howard W. Elm, Terminal Bldg., Lincoln 8, Neb.

March 8 - 9 — Maryland Nutrition Conference; Shoreham Hotel, Washington, D.C.; chm., Dr. R. D. Creek, Poultry Dept., University of Maryland, College Park.

March 13—Illinois Swine Growers Day; Univerity of Illinois, Urbana, Ill.

March 15-16—Oregon Feed & Seed Dealers Assn.; Sheraton Hotel, Port-

CALENDAR FOR 1961-62

NOVEMBER

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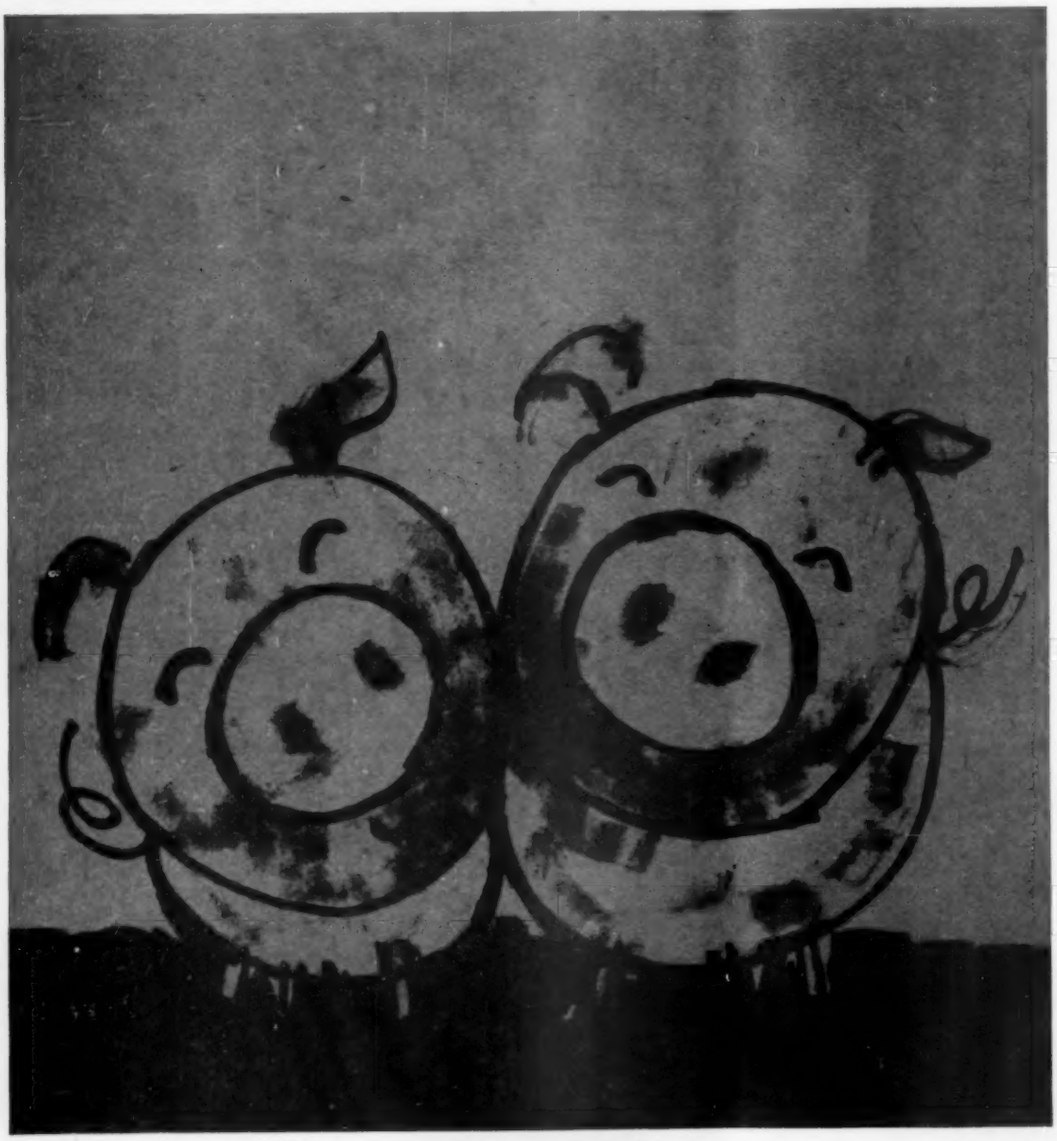

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March 15-17 — Pacific Dairy and Poultry Assn.; Biltmore Hotel, Los Angeles, Cal.; sec., Lloyd J. Powers, 1304 E. 7th St., Los Angeles 21.

March 19-21—Poultry and Egg National Board; Palmer House, Chicago, Ill.; mgr., Lloyd H. Geil, 8 S. Michigan Ave., Chicago 3.

March 21-23—Grain & Feed Dealers National Assn.: Denver-Hilton Hotel, Denver, Colo.; Secretaries Circle meetings March 19-20; sec., Herbert L. Sharp, 401 Folger Bldg., 725 15th St. N.W., Washington, D.C.

March 25-30 — Grain Elevator & Processing Superintendents; Town House Motel, Omaha, Neb.; sec., Dean M. Clark, 1115 Board of Trade Bldg., Chicago 4, Ill.

March 28—Distillers Feed Conference; Sheraton Gibson Hotel, Cincinnati, Ohio; Dr. Lawrence E. Carpenter, Executive Director, Distillers Feed Research Council, 1232 Enquirer Bldg., Cincinnati 2.

March 28—Commercial Egg Clinic: Texas A&M College, College Station; B. C. Wormeli, Extension Poultry Husbandman.

April 9-10 — National Institute of Animal Agriculture; Purdue University, Lafayette, Ind.; sec., Karl D. Butler, P.O. Box 521, First National Bank Bldg., Ithaca, N.Y.

April 10-12—Animal Health Institute; Statler-Hilton Hotel, Washington, D.C.; sec., D. L. Bruner, 512 Shops Bldg., Des Moines 9, Iowa.

April 13 — Illinois Cattle Feeders Day; University of Illinois, Urbana.

April 18—Nebraska Feeders Day; University of Nebraska, Lincoln; chm., Dr. Robert M. Koch, Animal Husbandry Dept.

April 26-28 — Texas Grain & Feed Assn.; Hotel Texas, Ft. Worth; sec., R. B. Bowden, 504 Ft. Worth Club Bldg., Ft. Worth 2.

April 26-28—California Hay, Grain & Feed Dealers Assn.; Biltmore Hotel, Los Angeles, Cal.; sec., Leo L. Johnson, 1400 10th St., Sacramento 14, Cal.

April 26-28—Kansas Grain & Feed Dealers Assn.: Broadview Hotel, Wichita, Kansas; sec., Orris E. Case, 609 Wiley Bldg., Hutchinson, Kansas.

April 27 — Indiana Cattle Feeders Day; Purdue University, Lafayette; chm., Dr. W. M. Beeson, Animal Science Dept.

May 4-5 — Illinois Grain Dealers Assn.; St. Nicholas Hotel, Springfield, Ill.; exec. sec., Donald E. Palmer, 910 Lehmann Bldg., Peoria, Ill.

May 10-11 — Alabama Poultry Industry Assn. Convention and Poultry Jubilee; Dinkler-Tutwiler Hotel, Birmingham, Ala.; sec., W. L. Walsh, Box 567, Montgomery.

May 10-12—American Feed Manufacturers Assn.; Conrad Hilton Hotel, Chicago, Ill.; sec., W. T. Diamond, 53 W. Jackson Blvd., Chicago 54.

May 27-28—Missouri Grain & Feed Assn.; Hotel Governor, Jefferson City, Mo.; sec., D. A. Meinershagen, Higginsville, Mo.

June 8 — Poultry Coronation Banquet; Dinkler Plaza Hotel, Atlanta, Ga.; sec., Abit Massey, Georgia Poultry Federation, Box 493, Gainesville.

June 28-30—Canadian Feed Manufacturers National Assn.; Sheraton Brock Hotel, Niagara Falls, Ontario, Canada; sec., Ontario Division, H. J. Willcock, 356 Eastern Ave., Toronto 8, Ontario.

July 17-19—American Poultry Congress & Exposition; St. Louis, Mo.; sec., American Poultry & Hatchery Federation, Don M. Turnbull, 521 E. 63rd St., Kansas City 10, Mo.

Aug. 13-18 — 12th World's Poultry Congress; Show Grounds of the New South Wales Royal Agricultural Society, Sydney, Australia; Dr. Cliff D. Carpenter, chairman, U.S. Participation Committee, 1207 Emerald Bay, Laguna Beach, Cal.; Dr. A. William Jasper, secretary, c/o AFBF, 2300 Merchandise Mart, Chicago 54, Ill.

Aug. 24—Purdue Swine Day; Purdue University, Lafayette, Ind.; chm., R. A. Pickett, Animal Science Dept.

Nov. 8 — Upper Peninsula Feed Dealers Assn.; State Office Bldg., Escanaba, Mich.; UPFDA, Box 342, Sault Ste. Marie.

1963

March 24-29 — Grain Elevator & Processing Superintendents; Commodore Perry Hotel, Toledo, Ohio; sec., Dean M. Clark, 1115 Board of Trade Bldg., Chicago 4, Ill.

Broiler Council's Ad Service Sent to 2,300 Retailers

RICHMOND, VA.—The second edition of the National Broiler Council's advertising service for retailers has been sent to over 2,300 retail executives across the country. Compiled in a file folder, the new service features full color, duotone, and black and white mats of a pair of baked fryers.

In addition to other glossy photographs, line art, copy and headline suggestions, two new items are included in this edition. Radio and television spot announcements were requested by retailers following the initial advertising kit's publication. Special 10 and 20-second radio spots and "TV 20's" are included.

The basic theme, carried throughout the service, is centered on the prestige value of chicken. The recipes included are for special chicken dishes for Sunday dinners, elegant evening dining, football party treats, and just all-time good eating.

"NBC's consumer education program through the nation's newspapers and magazines, as well as over TV and radio, will also be featuring this theme, and, thereby, step up the effectiveness of chicken advertising messages found in the retailer ads in their stores," commented Frank Frazier, NBC vice president. "The advertising service is another phase of NBC's programs designed to help sell more chicken more profitably," added Mr. Frazier.

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4. Increased Palatability and Appetite Appeal • 5. Other Important Elements

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Yeast Culture Values Proven by State College Tests

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Today 15% to 25% of all industrial multiwalls are made of CLUPAK extensible paper. Savings are the reason! Ask the man who sells you paper for a test shipment!

EXTENSIBLE CLUPAK PAPER — Compared to conventional kraft of equal basis weight has:

- Up to 7 times more controlled machine direction stretch.
- 3 to 5 times greater ability to withstand impact and shock.
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- Identical surface properties and printability.

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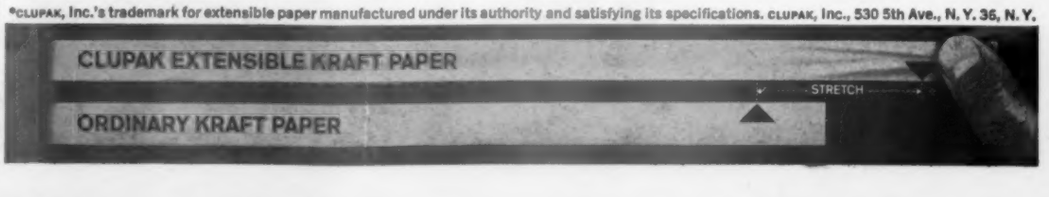

CUT DOWN SERVICE CALLS!

Tired of too many service calls because of "fair-weather" coccidiostat failures? NiCarb, virtually *coccidiocidal* in its wide range of activity, will give you maximum protection against coxy in *all* kinds of weather...*all* year 'round. Merck Chemical Division, Merck & Co., Inc., Rahway, N. J.

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Tried, Tested and Proved on over Four Billion Birds!

®TRADEMARKS OF MERCK & CO., INC.

Experiment With Collecting Solar Heat For Grain Drying

WASHINGTON — Two experimental solar heat collectors—designed specifically for drying grain, but with other potential uses on the farm—are being tested by agricultural engineers of the U.S. Department of Agriculture and the Kansas Agricultural Experiment Station.

Each collector makes use of transparent plastic to admit sunlight at the top and sides, and black plastic on the ground to absorb heat energy and prevent entry of ground moisture. The warmed air in the collector is drawn by a fan into the grain-drying bin. The collectors store only limited quantities of heat, and operate best in full sunshine.

The experimental collectors, now being tested for grain drying, may also prove useful for other heating purposes. Two uses suggested by the designers are to provide warm air in animal shelters, and to supplement heat in rural homes.

The collectors can be adapted easily to standard equipment used by dry grain with unheated air. As the temperature in the collector rises (as much as 25° F.), the relative humidity is lowered. This warmer, drier air dries the grain more quickly and efficiently than unheated air.

Limited experiments indicate that only half as much electrical energy is needed to run air-circulating fans when solar-heated air is used to dry grain as when unheated air is used. Solar-heat collecting equipment is best suited to farms where the volume of grain is too small to be dried economically by conventional fuel-fired equipment.

One of the collectors consists of a low, flat unit that collects solar heat energy and feeds the warmed air into a tentlike exhaust duct. The transparent and black plastics in the unit are held 3⅝ inches apart by a wood frame. The complete assembly covers a ground surface of approximately 800 sq. ft.

The other device is an inflated bag of transparent plastic at the top and sides and black plastic on the bottom, which is kept inflated by maintaining an internal air pressure slightly higher than the pressure of the surrounding atmosphere. This collapsible unit, covering 100 sq. ft. of ground surface when inflated, is light-weight, portable and easy to store.

The new heat-collecting devices are inexpensive to build, and as efficient for drying grain as the earlier roof-surface collector, the engineers say. Although polyethylene was used in the experimental models, a more weatherproof plastic is needed.

Making the study are Chester P. Davis, Jr., of USDA's Agricultural Research Service, and Ralph I. Lipper of the Kansas station. Last year these researchers reported the effectiveness of a metal and plastic surface on the roofs of storage structures in collecting heat for drying grain. They are continuing their studies.

ILLINOIS FIRM EXPANDS

ESMOND, ILL. — Farmers Grain Co., Esmond, has added $36,000 in equipment for grain bank and bulk balanced rations services. B&J Contractors, Lindenwood, Ill., installed the equipment, which includes a Roskamp huller and roller and Prater grinding and mixing and other equipment, plus bulk bins. Farmers Grain is a Master Mix dealer.

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DEALER AWARDS—Pictured in the photos above are two presentations of 25-year dealer plaques to dealers of the Beacon Milling Co., Cayuga, N.Y. In the first picture, Robert E. Miller (left), director of marketing for Beacon, is presenting a plaque to Frank Martin, owner of Nischwitz & Co., Inc., South Plainfield, N.J., while Howard Waldron, manager of the dealership, looks on. In the second picture, Mr. Miller, second from left, is pictured making the award to Andrew W. Roy of Mills & Roy Co., Inc., Sussex, N.J. Looking on are William A. Roy, left, and Frank Lott, both of Mills & Roy. This dealership received its first carload shipment June 30, 1936.

Urges New Concepts On Cottonseed Meal

NEW ORLEANS—Present concepts of using cottonseed meal primarily as a feed for cattle should not be allowed to continue.

Instead, the great possibilities for much more extensive use of cottonseed meal, not only for the feeding of swine and poultry, but also humans, opened up by the mixed solvent process should come to the dominant position in the thinking of the processing industry, said Dr. A. M. Altschul at a meeting of the National Cottonseed Products Assn. processing research subcommittee here.

Dr. Altschul is with the seed protein pioneering research laboratory of the Southern Utilization Research and Development Division, Agricultural Research Service, U.S. Department of Agriculture, here.

Also attending the conference were personnel from the Southern Division and Texas A&M College.

Garlon A. Harper, director of research and education for the National Cottonseed Products Assn., said in a discussion of the mixed solvent extraction process under development at the Southern Division that the cottonseed industry must look beyond the present economic considerations in evaluating new products and processes.

Nutritive Properties

Laboratory development of the process and the chemical and nutritive properties of the meals produced were described by Dr. V. L. Frampton, who said that these meals have a very low gossypol content. At the same time quality of the protein is better than average, because the meals are not subjected to high temperatures during processing.

He noted that the new process employs a carefully proportioned mixture of acetone, hexane and water for extraction of oil. Hexane, he pointed out, is commonly used alone.

A. Cecil Wamble, Cottonseed Products Research Laboratory, College Station, Texas, reporting on work being done there for the improvement of cottonseed protein products, said that that laboratory's octyl amine process shows considerable promise. Nutritionists who have worked with protein products produced by this method, which actually removes most of the gossypol without binding it to the protein, report excellent results in feeding tests, he said. One of the big problems in connection with this process is satisfactory refining of the oil, which contains most of the gossypol originally in the seed, he commented.

"BROWER MIXER
increases our feed profits...
costs less to operate"
Lock Bros. Milling Co.
Loose Creek, Missouri

"Our Brower Mixer does a good job of mixing our own brand of feeds and custom mixing — we figure it has upped our feed profits 10% and our custom mixing another 10%. We have never had a service problem. It is very economical to operate."

BROWER
Whirlwind MIXER

Exclusive Brower action WHIRLS the ingredients instead of just stirring or tumbling them . . . produces the most thorough mix you can get. Every sack has the same even mixture. Dependability, fast mixing action, and low cost operation make Brower the World's Largest Selling Mixer!

FAST and ECONOMICAL—a perfect blend in about 10 minutes at a power cost of only 3c to 5c a ton. Five sizes — 700, 1200, 2000, 3000 and 4000 pounds-per-batch mixing capacities. Above-floor and below-floor models. Heavy, welded construction — built for years of service.

BROWER "Whirlwind" mixing paddle at top WHIRLS ingredients for thorough, even mixture.

All-steel grill floor over hopper. You can easily and quickly remove all feed remaining at bottom of conveyor sleeve.

World's Largest Selling Mixer
EASY PAYMENT PLAN AVAILABLE

BROWER MFG. CO., 402 N. 3rd, QUINCY, ILLINOIS
Please send FREE CATALOG and complete information on the BROWER MIXER.
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JIFFY JOINT
TWO-PIECE ADJUSTABLE ELBOW

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8" diameter
- Adjusts to every angle!
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The quality and economical source of Vitamin D-2 for 4-footed animals. Every particle contains Vitamin D-2, thereby insuring splendid distribution, and all other leading feed additives.
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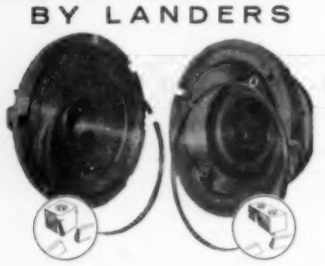
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Eliminates long, costly downtime in replacing standard die housings. Bushing absorbs the wear—is easily replaced in 15 minutes at a fraction of normal cost.
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High Protein Safflower Meal For Chickens

By Hobart R. Halloran
Halloran Research Farm
Modesto, Cal.

Safflower has become an important crop in the western U.S. It is a member of the composite family and produces valuable oil seeds. Safflower produces one of the oldest oil seeds known, some being found in the tombs of the Pharaohs.

The seed is grown primarily for its oil content which ranges from 24 to 40%. It is high in poly-unsaturated fatty acids and, therefore, is in demand as an edible oil. Substantial tonnages of whole-safflower meal have been used for dairy and beef cattle rations. This varies in protein content from 18 to 24% and contains about 36% fiber.

Recently a method for commercially separating most of the hulls has been perfected by Pacific Vegetable Oil Corp., San Francisco. This has resulted in a higher protein safflower meal. Continuous plant production has averaged close to 44% protein. Thus, another high protein supplement is available on the Pacific Coast.

The content of critical amino acids of the safflower meal is compared with soybean meal and cottonseed meal in Table 1. The values shown were calculated to a 44% protein level in all three protein sources for ease of comparison. The primary amino acid deficiency of the safflower meal is lysine.

The earliest safflower poultry work was done by Kratzer and revealed a deficiency of lysine and methionine in practical rations. In 1953 Grau and Zweigart used a 41% protein safflower meal made by Pacific Vegetable Oil Corp. and found that it could replace part or all of the soybean meal in an all-mash laying ration containing grains and fish meal. Egg production, feed consumption and fresh egg and six-month storage egg quality were as good with the safflower as with soy.

Previous Tests

In 1957 Petersen, et al., reported that high protein safflower meal could be used in rations for chick growth as a replacement for part or all of the soybean meal if 5% fish meal and either 5% or 10% meat-meal were included. In rations for egg production, safflower meal successfully replaced one-half the soybean meal. These rations contained 2.5% herring meal and 7.5% meat-meal. A combination of 15% of safflower meal and 14.5% of meat-meal gave satisfactory egg production, feed efficiency, egg weight and body weight.

Recent Tests

With the advent of the commercial decorticated safflower meal, more tests were needed to evaluate its use for poultry rations. A series of tests was started in 1960 at the Halloran Research Farm. The first consideration was to determine how the safflower meal would be as the sole source of protein. Therefore, a 10-day growth test was conducted which was a modification of the approach developed at the University of California under Drs. Grau and Kratzer.

Leghorn cockerels were placed on a regular starting ration for 10 days. They were then distributed into groups of 10 birds each. Starch was used as a carbohydrate source in the diets. All of the protein in the 20% protein ration was supplied by either the fish meal or the safflower meal. The calcium and phosphorus levels were equalized. In this first test the rations were not made isocaloric.

Table 2 gives the comparison of safflower meal with fish meal. This sample of safflower meal resulted in the chicks growing 86% as much as the birds on the fish meal.

The same basic technique was followed on the next test except that meat-type cockerels were employed. All of the rations were calculated to be isocaloric. Here we wanted to determine how much soybean meal could be replaced by safflower meal in comparison with a ration containing one-third of the protein from fish meal and two-thirds of the protein from soybean meal. The results in Table 3 show that in this diet all of the soybean meal could be successfully replaced by safflower meal.

The diet with all of the protein from safflower meal gave 78% of the gain of the control and the feed conversion was considerably higher. The addition of methionine had little, if any, beneficial effect. The addition of lysine resulted in slightly better gain than the control and the same feed conversion. Lysine and methionine added together showed no improvement in weight over lysine addition alone.

SAFFLOWER—This photo shows a safflower plant in bloom.

Laying Hens

The third test was conducted on laying hens. Nine-month-old laying hens were distributed into groups of 27 birds each. The egg productions of each group were equalized on the basis of the previous 12 days production. Two groups of birds were placed on each treatment for six weeks. They were housed in three-bird cages with nine cages (27 birds) per group.

The following are the protein analyses of the protein meals used: Soybean oil meal, 45.1%; decorticated safflower meal, 44.1% (42.4% with added fat); egg tested cottonseed meal, 45.1%, and Peruvian fish meal, 66.1%.

All of the meals were examined microscopically. The vegetable meals proved to be of excellent quality. The fish meal rated "good" in a classification rating of excellent, good, fair and poor.

Since the safflower meal had a fat content of 1.33%, enough soybean oil was added to the meal to bring the fat content up to 5.0%. The resulting protein content of the meal was 42.4%. And, 7.5 and 15% of this meal and oil mixture were fed.

Egg production and feed conversion figures are shown in Table 4. Each treatment is the mean of two groups. These results show that the 7.5% and 15% safflower flour meal groups gave equivalent egg production to the birds receiving no safflower meal. The inclusion of fish meal at 2.5% did not improve the results. There was a slight indication of improved feed conversion with the safflower meal groups, possibly because of the added oil.

Hen weights were taken at the beginning and the end of the tests. There were no significant differences.

Droppings observations showed more

TABLE 1. Critical Amino Acids (Expressed as % of Protein Meal)

	Safflower Meal %	Soybean‡ Meal %	Cottonseed‡ Meal %
Protein	44.0	44.0	44.0
Arginine	3.4*	3.3	4.4
Lysine	1.2*	2.8	1.8
Methionine	0.66*	0.61	0.66
Cystine	0.76†	0.65	0.88
Tryptophan	0.53*	0.66	0.57

*Adapted to 44% safflower meal from data of Lyman, Kuiken and Hale; J. Agr. Food Chem., 4, 1008 (1956).

†Analysis of a 44% safflower meal sample by Wisconsin Alumni Research Foundation.

‡Adapted to 44% soybean meal and 44% cottonseed meal from Protein and Amino Acids in Animal Nutrition, 4th Edition by H. J. Almquist.

TABLE 2. Trial Using Leghorn Cockerels

Sole Source of Protein	Relative Gain of Chicks %	*Feed Conversions
Fish meal, 66% protein	100	2.09
Safflower meal, 44% protein	86	2.77

*Feed Conversion: Pounds of feed per lb. of gain.

TABLE 3. Trial Using Meat Type Cockerels

—Proportion of Protein— Supplied by: Fish Meal	Soybean Meal	Safflower Meal	Added Amino Acids Methionine	Lysine	Relative Gain of Chicks %	*Feed Conversions
⅓	⅔	..	..	..	100	1.81
⅓	⅓	⅓	..	..	101	1.66
⅓	..	⅔	..	..	100	1.76
..	..	all	..	..	78	2.43
..	..	all	+	..	83	2.44
..	..	all	..	+	105	1.81
..	..	all	+	+	99	1.70

*Feed Conversion: Pounds of feed per pound of gain.

TABLE 4

—Per Cent of Each Meal— Soybean Meal %	Safflower Meal (5.0% fat)	Egg-Tested Cottonseed Meal	Fish Meal	% Egg Production	*Feed Conversions
12.5	..	7.5	..	76.2	4.07
13.1	7.5	..	..	77.1	3.86
6.1	15.0	..	..	75.0	3.96
9.0	7.5	..	2.5	75.6	3.99

*Feed Conversion: Pounds of feed per dozen eggs.

droppings in the groups receiving feed with 15% safflower meal than in any others. There was no noticeable effect on the wetness of the droppings. This was an observation; no moisture analyses were made. Egg weights showed no effect of the various treatments. Egg quality measurements were made. These included albumen height, Haugh unitage, shell thickness and yolk color. All treatments gave similar results confirming that the safflower meal diets produced good eggs also.

Eggs were stored at room temperature, 65° to 85°F. They were broken-out after one, two and four months. No discoloration of the yolks or other visual effects on the eggs were observed.

Safflower Litter

A by-product of the high protein meal is safflower meal screenings. This was tested as a litter with a two to one mixture with wood shavings with Leghorn pullets and turkeys. It showed some advantages over rice hulls and wood shavings. The safflower litter was more absorbent and did not blow away as occasionally happens with rice hulls in an open house. No weights were taken on the pullets. Weight gains and feed conversions were similar in eight week old turkeys.

Summary

A series of tests was conducted on decorticated safflower meal. The chick work showed that the meal is an excellent protein supplement for poultry feeds when the lysine content is supplemented. This can be done with good quality protein supplements with a high lysine content or with lysine itself.

In laying hen tests, the inclusion of as much as 15% of the ration as high protein safflower meal resulted in egg production and feed conversion equivalent to the control. The safflower meal had no effect on egg quality measurements.

Safflower meal screenings mixed with wood shavings proved to be an excellent litter for pullets and turkeys.

The research reported above was sponsored by Pacific Vegetable Oil Corp., San Francisco.

LSU Second Livestock Producers Day Set

BATON ROUGE, LA.—The second Livestock Producers' Day, sponsored by the animal industry department of Louisiana State University, Baton Rouge, will be Jan. 31, 1962, it was announced by the committee.

On the program are the following speeches: "Louisiana Carcass Beef Supply and Demand," by A. M. Hickman, meat merchandiser, Child's Big Chain, Shreveport; "Potential of Louisiana Meeting Beef Demand," Dr. S. H. Fowler, animal industry department, Louisiana State; "Production and Availability of Feed Grains in Louisiana," A. G. Killgore, state agent, Louisiana State; and "Operation of a Cattle Feeding Business," Grady Shepard, cattle feeder, Hale Center, Texas.

The afternoon will have discussion groups on feedlot management, nutrition and marketing. Tours will be conducted of various research units and laboratories. The program is open to anyone who wants to attend.

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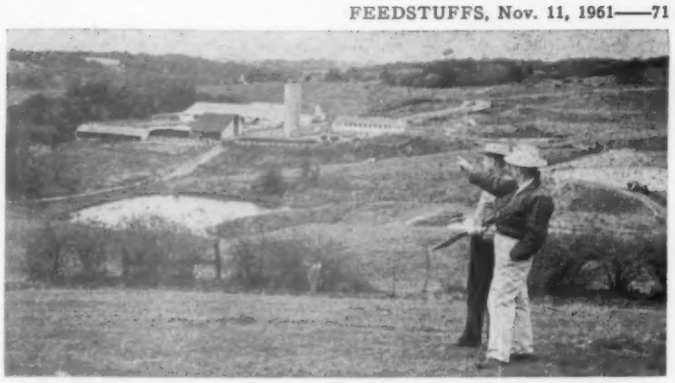
Kent Feeds Expands Research Facilities

MUSCATINE, IOWA — Expansion of the Kent Feeds, Inc., research facilities through the addition of 350 acres of farm land has been announced by J. H. Kent, executive vice president of the firm.

Mr. Kent said that the additional land is adjacent to the firm's present research farm at the company headquarters here. He stated the increased acreage will allow for an expansion of the present beef, dairy, swine, poultry and turkey research as well as provide land for greater concentration on pastures and forage research.

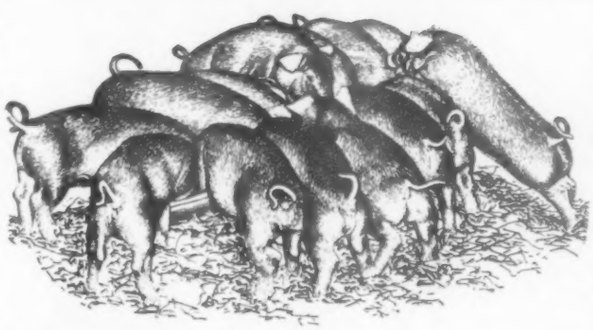
The Kent official emphasized that the expanded facilities will be used strictly for experimental purposes and not for general livestock and poultry production.

In making the announcement, Mr. Kent emphasized, "Like all industries, the future of the poultry and livestock industry, and subsequently the feed industry, is engulfed by unknowns. Progress can only be made by making the unknown known and by refuting or confirming the commonly accepted through research."



KENT RESEARCH—G. A. Kent, right, president of Kent Feeds, Inc., points out the boundaries of a 350 acre research farm addition for Kent to Dr. C. J. Lewis, director of research and nutrition for the firm.

LITTLE PIGS EAT BETTER



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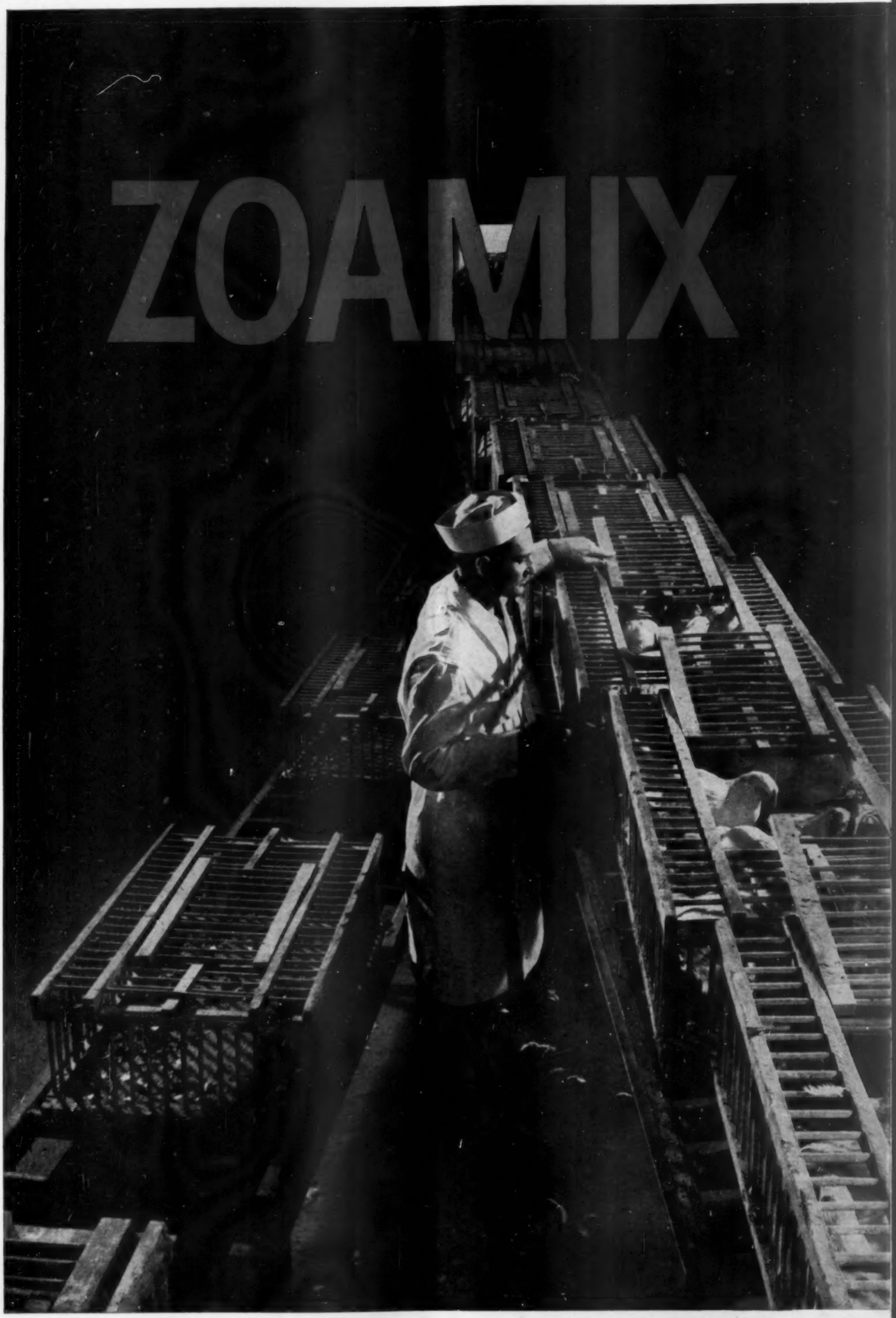
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Free educational film. "Chemicals: Vital to Our Food Supply," a 22-minute sound and color story of the contributions of chemicals to mankind, is now available for screening or group showings. Film has many references to the poultry industry. For bookings, contact your Dow Feed Industry sales representative.

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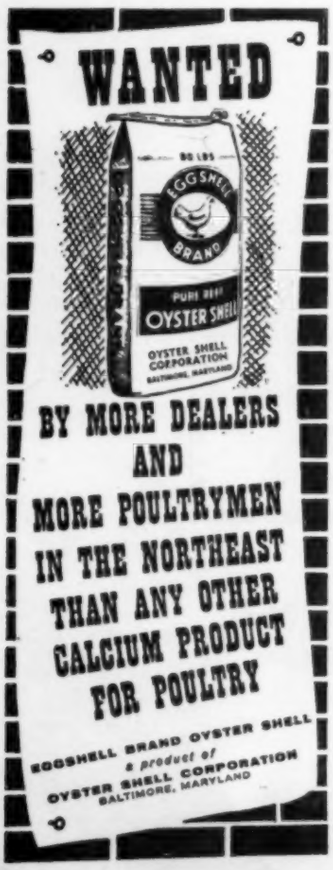

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FEEDSTUFFS
A WEEKLY NEWSPAPER
For the Feed Manufacturer, Feed Jobber
Feed Broker and Feed Dealer

Monthly Index
September, 1961

Volume 33 Numbers 35-39

ALFALFA:
Addition of Dehydrated Alfalfa to Low Quality Hay Ups Milk Output ..... Sept. 30—p 58
Dehydrated Alfalfa Price Advanced $2 Following Cold Wave ..... Sept. 30—p 1
Up or Down ..... Sept. 23—p 46

AMINO ACIDS:
Poultry Science Assn. Meeting ..... Sept. 9—p 26; Sept. 16—p 26
Putting Research to Work ..... Sept. 9—p 50
Use of Amino Acid Silhouettes Explained ..... Sept. 30—p 74

ANTIBIOTICS:
A Close Look at Bloat ..... Sept. 16—p 70
Change Antibiotic Level Regulations ..... Sept. 9—p 7
Kentucky Livestock Field Day ..... Sept. 9—p 20
Poultry Science Assn. Meeting ..... Sept. 16—p 26
Swine Day (Missouri) ..... Sept. 30—p 78

ASSOCIATIONS:
Alabama Independent Poultry Prod. Assn. (Meeting) ... Sept. 16—p 4
Alabama Poultry Industry Assn. (Jubilee) ..... Sept. 16—p 36
(Study Orders, No Action Now) ..... Sept. 23—p 6
American Farm Bureau Federation Assn. (Corn Plan) .. Sept. 30—p 64
(Oppose Controls) ..... Sept. 23—p 7
American Feed Manufacturers Assn. (Election) ..... Sept. 9—p 4
(Marketing Seminar) ..... Sept. 23—pp 6 & 7; Sept. 30—p 7
(Minority Would Accept Marketing Orders ..... Sept. 30—p 1
(Poultry Prices Predicted) ..... Sept. 16—p 1
American Poultry & Hatchery Federation Assn. (Expect No Federal Relief) ..... Sept. 23—p 1
(Marketing Order) ..... Sept. 9—p 4
(No. 1 Problem Too Much Feed Capacity) ..... Sept. 9—p 7
American Veterinary Medical Assn. (Cooperation With Veterinarians) ..... Sept. 9—p 46
Animal Health Institute (Animal Health Month) ..... Sept. 23—p 32; Sept. 30—p 12
Arkansas Poultry Federation (Arkansas Rejects Controls) ..... Sept. 23—p 4
(Personnel Change) ..... Sept. 9—p 11
Colorado Grain & Feed Dealers Assn. (Industry-College Committee) ..... Sept. 9—p 24
Columbus Feed Club (Meeting) ..... Sept. 9—p 32
Feed Production School, Inc. (Designation of Officers) .. Sept. 23—p 10
Georgia Egg Assn. (Election) ..... Sept. 9—p 59
Georgia Feed Dealers Assn. (Meeting) ..... Sept. 9—p 1
Grain & Feed Dealers National Assn., (Changing Feed Industry) ..... Sept. 9—p 38
(Meeting) ..... Sept. 30—p 90
Hayward Poultry Producers Assn. (Tonnage Increased) . Sept. 9—p 54
Institute of American Poultry Industries (Meeting) ... Sept. 16—p 7
Iowa Turkey Federation, Inc. (Asks Marketing Orders) . Sept. 16—p 4
Kentucky Feed & Grain Assn. (Feed Conference) ... Sept. 9—p 6
Minnesota Turkey Growers Assn. (Funds for Turkey Study) ..... Sept. 30—p 8
National Broiler Council (Retailers Boost Broiler Industry) ..... Sept. 16—p 23
National Dairy Cattle Congress (Meeting) ..... Sept. 30—p 95
National Turkey Federation (No Provisions for Production Quotas) ..... Sept. 9—p 1
New Hampshire Poultry Growers Assn. (Regulations Needed) ..... Sept. 23—p 4
Pennsylvania Millers & Feed Dealers Assn. (Millers Really Manufacturers) ..... Sept. 9—p 7
Pet Food Institute (Convention) ..... Sept. 30—p 97
Poultry Science Assn. (Meeting) ..... Sept. 9—p 26; Sept. 16—p 26
St. Louis Milling & Grain Club (Outing) ..... Sept. 9—p 91
So. Carolina Poultry Assn. (Dixie Poultry Exposition) ... Sept. 23—p 14
U.S. Feed Grain Council (Personnel on Tour) ..... Sept. 30—p 62
Virginia Poultry Federation (Orders Favored) ..... Sept. 16—p 97

AUTHORS:
Bartley, Dr. Erle E.
A Close Look at Bloat ..... Sept. 16—p 70
Bird, Dr. H. R.
Reports on Poultry Nutrition From Meeting of the Poultry Science Assn. ..... Sept. 9—p 26; Sept. 16—p 26
Blair, Jess J.
Merger Reported Satisfactory for Two Broiler Companies ..... Sept. 16—p 78
Small Feed Mill Finds Success in Contract Pullet Growing ..... Sept. 23—p 30
Texas Broiler Firm Adds New Milling Facilities ..... Sept. 9—p 76
Edwards, Hardy M., Jr.
Calcium Requirements and Feeding Practices for Broilers and Laying Hens ..... Sept. 23—p 86
Hoefer, Dr. J. A. (See Pond, Dr. W. G.)
Pierce, James G.
Methods of Determination of the Distribution of Ingredients in Feed Mixtures ..... Sept. 9—p 60
Nelson, Al P.
Feed Man's Own Feeding Projects ..... Sept. 23—p 38
Firm Hatches 900,000 Turkey Poults ..... Sept. 23—p 18
Firm Promotes Certified Meat-Type Hogs ..... Sept. 16—p 42
Repairing and Servicing Own Vehicles ..... Sept. 9—p 30
Production Expansion Program ..... Sept. 9—p 40
Who Keeps the Records — Feed Dealer, Farmer or Both? ..... Sept. 23—p 34
Wisconsin Egg Program ..... Sept. 30—p 82
Pond, Dr. W. G.; Hoefer, Dr. J. A.
Parakeratosis: Variation in Growing Pigs as Related to Location, Feed Source, Water Supply and Zinc Supplementation ..... Sept. 30—p 26
Tunks, Fred E.
New Kent Plant Supplies 125 Dealers in Iowa ..... Sept. 9—p 18

CANADA:
Canada Mills May Get Quota-Exempt Grain ..... Sept. 23—p 44
Manitoba Plans Sale of Turkeys Above Government Floor Prices ..... Sept. 16—p 45
Turkey Numbers Up on Canadian Farms ..... Sept. 23—p 64

CATTLE FEEDING:
Dr. Beeson Tells Nutrition Developments ..... Sept. 16—p 86
Kentucky Livestock Field Days ..... Sept. 9—p 20
Tests on Lower Cost Beef Feeding Told ..... Sept. 16—p 83

COMPANIES:
Agricultural Supply, Inc. ..... Sept. 23—p 30
Allied Mills, Inc. (Promotion) ..... Sept. 9—p 10
Amburgo Co. (Sales Event) ..... Sept. 30—p 95
Anderson-Smith Milling Co. (Firm Liquidates) ..... Sept. 30—p 7
American Cyanamid Co. (New Agricultural Center) .. Sept. 30—p 16
American Maize-Products Co. (Grain Division) ..... Sept. 16—p 14
Arbor Acres Farms, Inc. (Individual Action Urged by Breeder) ..... Sept. 23—p 7
(Promotion) ..... Sept. 30—p 96
Beacon Milling Co. (Profitable Management Edition) ... Sept. 30—p 64
Belmond Industries, Inc. (Turkey Firm) ..... Sept. 30—p 57
Blatchford Calf Meal Co. (Election) ..... Sept. 16—p 4
Butler Manufacturing Co. (Appointment) ..... Sept. 16—p 16
(Bin Flow Movie Premiere) ..... Sept. 23—p 73
Burgess Poultry Marketing, Inc. (Adds Milling Facilities) ..... Sept. 9—p 76
Burrus Feed Mills (Appointment) ..... Sept. 30—p 4
Cargill, Inc. ("Merchants of the Year") ..... Sept. 9—p 10
Colonial Poultry Farms, Inc. (Staff Changes) ..... Sept. 16—p 14
Commercial Solvents Corp. (Bacitracin-Penicillin Combination Asked) ..... Sept. 9—p 7
Consolidated Blenders, Inc. (Dehydrated Pellets Move by Barge) ..... Sept. 9—p 101
Cooperative G.L.F. Exchange, Inc. (Changes in Dairy Feeds) ..... Sept. 30—p 14
Corn Products Co. (Appointment) ..... Sept. 16—p 14
Daffin Corp. (Promotion) ..... Sept. 16—p 16
Dawe's Laboratories, Inc. (Research Building) ..... Sept. 30—p 58
Dempster Mill Mfg. Co. (Retirement) ..... Sept. 16—p 16
Doughboy Industries, Inc. (Buys Televisco Corp.) ..... Sept. 9—p 4
Dow Chemical Co., The (Appointment) ..... Sept. 16—p 14
Eastern States Farmers Exchange, Inc. (Decentralizes Management) ..... Sept. 9—p 44
(New Egg Branch) ..... Sept. 9—p 8
Erving's Hatcheries (Pullets for 4-H Project) ..... Sept. 9—p 79
Farmers Mercantile Co. (New Plant) ..... Sept. 30—p 38
Farmers Union Grain Terminal Assn. (Linseed Co. Acquired by GTA) ..... Sept. 30—p 4
(Pilot Cooperative Feedlot) ..... Sept. 16—p 52
Georlings Feed Mills, Inc. (Service School) ..... Sept. 30—p 37
General Mills, Inc. (Feed Dealers School) ..... Sept. 30—p 14
Glencoe Mills, Inc. (Appointment) ..... Sept. 9—p 10
Grain Processing Corp. (More Fermentation Facilities) . Sept. 23—p 24
Hales & Hunter Co. (Cattle Feeds Clinic) ..... Sept. 30—p 96
Heisdorf & Nelson Farms, Inc. (Asian Distributor) .... Sept. 16—p 40
Herring Sales Co. (Appointment) ..... Sept. 9—p 11
Highway Equipment Co. (Appointment) ..... Sept. 30—p 96
Hoffmann-La Roche, Inc. (Feed Grade Vitamin A Unchanged) ..... Sept. 23—p 4
Honeggers' & Co. (Election) ..... Sept. 9—p 4
(Farm Service School) ..... Sept. 16—p 54
Hubbard Milling Co. (Beef Day) ..... Sept. 16—p 86
International Minerals & Chemical Corp. (Bag Differential) ..... Sept. 16—p 44
Kent Feeds, Inc. (New Mill) ..... Sept. 9—p 18
Lambright Hatchery & Poultry Farm (Sales Manager) .. Sept. 16—p 16
Merck & Co., Inc. (Amino Acid Silhouettes) ..... Sept. 30—p 74
(Thibenzole Tests) ..... Sept. 16—p 79
Michigan Feed Mill Co. (Will Make Feed for General Mills) ..... Sept. 23—p 24
Miller & Bushong, Inc. (Appointment) ..... Sept. 30—p 96
Monsanto Chemical Co. (Chicago Sales District) ..... Sept. 16—p 16
Morrell & Co. (Feed Changes Reported) ..... Sept. 16—p 1
Nebraska Consolidated Mills Co. (Has Record Year) .. Sept. 23—p 1
Nichols Poultry Farm, Inc. (New Breeding Organization) ..... Sept. 30—p 95
Nordquist Feed Mills (Buys Seattle Poultry Co.) .... Sept. 30—p 85
Nuleid Farmers Assn. (Buys Processing Plant) ..... Sept. 9—p 4
Nutrena Feeds, Inc. (Sales Meetings) ..... Sept. 9—p 38
Owens Poultry & Egg Co. (Drops Broiler Production) .. Sept. 30—p 103
Pacific Molasses Co. (Plant Set) ..... Sept. 9—p 4
Paymaster Farms (Operation Shutting Down) ..... Sept. 9—p 6
Peavey, F. H., & Co. (Adds to Executive Group) ..... Sept. 9—p 10
Pfizer, Chas., & Co. (Awards for County Agents) ..... Sept. 23—p 16
(Sales Conference) ..... Sept. 16—p 93
Pillsbury Co., The (Broiler Statement) ..... Sept. 16—p 6
(Stockholders Told of Difficult Period of Feed Trade) . Sept. 23—p 46
Protein Blenders, Inc. (Football Blender) ..... Sept. 16—p 91
(New Assignments) ..... Sept. 9—p 11
Ralston Purina Co. (Broiler Statement) ..... Sept. 16—p 6
(Two to One Stock Split) ..... Sept. 30—p 1
Raymond Bag Corp. (Appointment) ..... Sept. 9—p 11
Rockingham Cooperative Farm Bureau (Record Year) .. Sept. 23—p 46
Seattle Poultry Co. (Sells to Nordquist Feed Mills) .... Sept. 30—p 85
Security Mills, Inc. (Appointment) ..... Sept. 30—p 7
Scott County Poultry Co. (Appointment) ..... Sept. 16—p 14
Shellbuilder Co. (How Shelley Sells Shell) ..... Sept. 9—p 88
Smith-Douglass CDP (Phosphate Supplement Available at Texas Port) ..... Sept. 16—p 8
Sprout, Waldron & Co. (Retirements) ..... Sept. 30—p 96
Squibb, E. R., & Sons (Nystatin Petition) ..... Sept. 9—p 7
Smith, J. Howard, Inc. (Symposium) ..... Sept. 9—p 79
Stamper, F. M., Co. (Youth Auction) ..... Sept. 30—p 72
Sterwin Chemicals Inc. (Promotion) ..... Sept. 16—p 14
Summers Elevator Co. (Promotes Meat-Type Hogs) ... Sept. 16—p 42
Swift & Co. (Managerial Shifts) ..... Sept. 30—p 96
Thompson's Hatchery (Hatches 900,000 Turkey Poults) .. Sept. 23—p 18
Triple F Feed Co. (Appointment) ..... Sept. 23—p 7
(New Firm) ..... Sept. 16—p 1
Quaker Oats Co., The (Heroic Dog) ..... Sept. 9—p 58
(Sales Report) ..... Sept. 16—p 1
Walsh Grain Co., The (St. Paul Terminal) ..... Sept. 23—p 6
Warren, J. L., Inc. (Appointment) ..... Sept. 30—p 96
Wenger Mixer Mfg. (Tour of Europe, Africa) ..... Sept. 9—p 27
Western Condensing Co. (New Division Opening) .... Sept. 16—p 11
Whitmoyer Laboratories, Inc. (Appointment) ..... Sept. 9—p 10
(Promotion) ..... Sept. 30—p 96
Worley Mills (Public Relations) ..... Sept. 9—p 32

CONDEMNATIONS:
Condemnation Rate Under Year Earlier ..... Sept. 16—p 90

CONFERENCES:
American Feed Manufacturers Assn. Marketing Seminar (Chicago) ..... Sept. 23—pp 1, 6, 7; Sept. 30—p 7
Dixie Poultry Exposition ..... Sept. 23—pp 7 & 50
Feed Production School ..... Sept. 16—p 1
Georgia Poultry Institute ..... Sept. 16—p 22
Iowa Feed Conference ..... Sept. 30—p 1
Kentucky Feed Conference ..... Sept. 9—p 6
Kentucky Livestock Field Days ..... Sept. 9—p 20
Midlands Poultry Progress Day ..... Sept. 16—p 88
Minnesota Nutrition Conference ..... Sept. 30—p 6
Poultry Day (Orono, Maine) ..... Sept. 30—p 20
Poultry Science Assn. ..... Sept. 9—p 26; Sept. 16—p 26
Small Mill Workshop ..... Sept. 23—p 10
Swine Day (University of Missouri) ..... Sept. 30—p 78

CONSUMPTION & PRODUCTION:
North Dakota Feed Tonnage Drops ..... Sept. 30—p 52

CORN:
CCC Corn to Be Offered at Market Prices ..... Sept. 16—p 1
New Sales Policy for Out of Condition Corn ..... Sept. 16—p 7
Putting Research to Work ..... Sept. 9—p 50
Swine Day (Missouri) ..... Sept. 30—p 78

CREDIT & FINANCING:
July Outstandings of Trade and Bank Credit for Broilers Up in S. E. ..... Sept. 9—p 8
Midlands Poultry Progress Day ..... Sept. 16—p 88

DETERGENTS:
Putting Research to Work ..... Sept. 30—p 22

DISEASE:
Georgia Poultry Institute ..... Sept. 16—p 22
Parakeratosis: Variation in Growing Pigs as Related to Location, Feed Source, Water Supply and Zinc Supplementation ..... Sept. 30—p 26
Poultry Science Assn. Meeting ..... Sept. 16—p 26

EGGS:
Colorado Study Shows Egg Matrix Changes During Hot Weather ..... Sept. 30—p 42

ENERGY:
Minnesota Nutrition Conference ..... Sept. 30—p 6
Test Energy-Protein Levels for Layers ..... Sept. 30—p 72

ENZYMES:
Poultry Science Assn. Meeting ..... Sept. 16—p 26
Research Indicates Supplemental Enzymes for Cows Up Milk Output 2% on Less Feed ..... Sept. 23—p 47

EXCHANGES:
Los Angeles Grain Exchange ..... Sept. 9—p 8

FARM PROGRAM:
Farm Policy in the Feed Hopper ..... Sept. 30—p 1
Market Action Disturbs USDA ..... Sept. 9—p 1
Minority Would Accept Marketing Order ..... Sept. 30—p 1
Reaffirms Supply Control Proposals ..... Sept. 30—p 52

FAT:
Kentucky Livestock Field Days ..... Sept. 9—p 20

FEED INDUSTRY:
Kentucky Feed Conference ..... Sept. 9—p 6
Minority Would Accept Marketing Orders ..... Sept. 30—p 1

FISH PRODUCTS:
Amino Acid Needs Studied at Smith Symposium ..... Sept. 9—p 79
Fish Meal Does Not Flavor Beef ..... Sept. 23—p 75

FLAVOR:
Poultry Science Assn. Meeting ..... Sept. 16—p 26
Swine Day (Missouri) ..... Sept. 30—p 78

GOVERNMENT AID:
Broadened Livestock Feed Program ..... Sept. 16—p 37

GRAIN BANKS:
Small Mill Workshop ..... Sept. 23—p 10

GRIT:
Putting Research to Work ..... Sept. 23—p 78

HORMONES:
Kentucky Livestock Field Days ..... Sept. 9—p 20
Progress of Beef, Sheep, Hog Studies at Mississippi ..... Sept. 23—p 24
Swine Day (Missouri) ..... Sept. 30—p 78

INSECTICIDES:
Anti-Grub Feeds OK Now Until Oct. 31 ..... Sept. 30—p 94

INTEGRATION & CONTRACT FARMING:
Broiler Farm Growers Form Group to Get Voice in Industry ..... Sept. 16—p 91
Demand for High Quality Eggs Is Behind Wisconsin Program ..... Sept. 30—p 82
Dixie Poultry Exposition ..... Sept. 23—p 50
Efficiency Seen as Key to Contracting Future ..... Sept. 30—p 32
Feed Men's Own Feeding Projects ..... Sept. 23—p 38
Merger Reported Satisfactory for Two Broiler Companies ..... Sept. 16—p 78
Midwestern Egg Program Described ..... Sept. 30—p 76
Small Feed Mill Finds Success in Contract Pullet Growing ..... Sept. 23—p 38
Suggest Probe of Integration ..... Sept. 23—p 4
Suggest Turkey Marketing Co-ops Consider Feed Mfg. ..... Sept. 23—p 72

LITERATURE:
Feed Production School ..... Sept. 30—p 10
Microscopy Manual Available ..... Sept. 30—p 29
Print Profitable Dairy Management Edition ..... Sept. 30—p 64

LIVESTOCK NUMBERS:
Gain in Cattle Numbers Ahead ..... Sept. 9—p 42
Hog Crop Expanding Now, But Upturn End Could Come in 1962 ..... Sept. 16—p 59
USDA Indicates Modest Increase in Pig Crop ..... Sept. 23—p 1

MANAGEMENT—BUSINESS:
AFMA Marketing Seminar ..... Sept. 23—pp 6 & 7
Feed Men's Own Feeding Projects ..... Sept. 23—p 38
Financial Records for Local Feed Business ..... Sept. 16—p 18
Firms Save Money by Repairing and Servicing Own Vehicles ..... Sept. 9—p 30
Iowa Feed Conference ..... Sept. 30—p 1
Marketing Seminar (Chicago) ..... Sept. 30—p 7
Merger for Two Broiler Companies ..... Sept. 16—p 78
Midlands Poultry Progress Day ..... Sept. 16—p 88
Poultry Processors Get Accounting Plan ..... Sept. 16—p 83

MANAGEMENT—LIVESTOCK & POULTRY:
Midlands Poultry Progress Day ..... Sept. 16—p 88
Mississippi Group Encourages Better Management ..... Sept. 30—p 28
Open Front Pig Barns ..... Sept. 30—p 75
Putting Research to Work ..... Sept. 30—p 22
Summer Stress on Layers ..... Sept. 9—p 78
Swine Day (Missouri) ..... Sept. 30—p 78
Zone Ventilation for Farrowing Stalls ..... Sept. 30—p 89

MARKETING:
AFMA Seminar ..... Sept. 23—pp 1 & 6; Sept. 30—p 7
Demand for High Quality Eggs Is Behind Wisconsin Program ..... Sept. 30—p 82
Georgia Egg Producer Uses Carrier Boys ..... Sept. 16—p 60
How Shelley Sells Shell ..... Sept. 9—p 88
Midwestern Egg Program ..... Sept. 30—p 76
Poultry Day (Maine) ..... Sept. 30—p 20
Proposes Broiler Markup Limitation for Chain Stores ..... Sept. 23—p 56

MARKETING ORDERS:
Broiler Industry Advised to Expect No Federal Relief ..... Sept. 23—p 1
Broiler Men Discuss Marketing Order ..... Sept. 16—p 7
Control Program on Market Birds Seen as Remote ..... Sept. 9—p 1
Dixie Poultry Exposition ..... Sept. 23—pp 7 & 50
Georgia Poultry Federation Meeting ..... Sept. 9—p 1
Marketing Orders Forgotten for Now ..... Sept. 23—p 1
No Poultry Action This Session ..... Sept. 16—p 1
Orders Favored ..... Sept. 16—p 97
Push for Marketing Orders ..... Sept. 16—p 1
Renewed Moves May Come in 1962 ..... Sept. 23—p 1
Supply-Management for Broilers Discussed ..... Sept. 23—p 1

MERCHANDISING:
Missouri Firm Promotes Certified Meat-Type Hogs ..... Sept. 16—p 42
Small Mill Workshop ..... Sept. 23—p 10
Who Keeps the Records? ..... Sept. 23—p 34

MICROSCOPY:
Illinois Microscopy Course Completed ..... Sept. 30—p 64

MINERALS:
Calcium Requirements and Feeding Practices for Broilers and Laying Hens ..... Sept. 23—p 86
Discusses Calcium Intake and Egg Shell ..... Sept. 23—p 58
Limestone High in Magnesium Can Cause Rickets in Poultry ..... Sept. 30—p 95
Kentucky Livestock Field Days ..... Sept. 9—p 20
Minnesota Nutrition Conference ..... Sept. 30—p 6
Nutritionist Comments on Calcium Levels ..... Sept. 16—p 23
Parakeratosis: Variation in Growing Pigs as Related to Location, Feed Source, Water Supply and Zinc Supplementation ..... Sept. 30—p 26
Poultry Science Assn. ..... Sept. 16—p 26

OATS:
Up or Down ..... Sept. 16—p 92

PELLETING:
Poultry Science Assn. Meeting ..... Sept. 16—p 26

POULTRY FEEDING:
Mississippi Report on Poultry Research ..... Sept. 23—p 84

POULTRY INDUSTRY:
Alabama Independent Poultry Producers Assn. ..... Sept. 16—p 4
Broiler Farm Growers Form Group ..... Sept. 16—p 91
Broiler Picture in Better Focus ..... Sept. 30—p 1
Congressman Asks Food Chain Probe ..... Sept. 9—p 4
Congressional Unit Hears Feed Men on Broiler Roles ..... Sept. 16—p 1
Cooperative Officials Discuss Broiler Action ..... Sept. 30—p 4
Feed Executives' Broiler Statements ..... Sept. 16—p 6
Got a Plan for Broiler Problem? ..... Sept. 23—p 62
Midlands Poultry Progress Day ..... Sept. 16—p 88
Minnesota Turkey Growers Assn. ..... Sept. 16—p 1
Mississippi Group Takes Steps to Help Meet Broiler Problems ..... Sept. 30—p 28
New Jersey Poultryman Hear Predictions on Egg Production ..... Sept. 30—p 88
Oklahoma Poultry Industry Get-Together ..... Sept. 16—p 48
Over-Production Rapped at Texas Hearing ..... Sept. 16—p 7
Push for Marketing Orders ..... Sept. 16—p 1
Would Exchange Poultry Products for Surplus Grain ..... Sept. 16—p 7
Yes and No Answers Found for Questions on Turkey Cut-Backs ..... Sept. 30—p 1

POULTRY NUMBERS:
Broiler Supply Flock Placement Up 8% ..... Sept. 23—p 8
Egg-Type Chick Output Showing Sharp Increases ..... Sept. 23—p 1
Poult Output Still Ahead of 1960 ..... Sept. 23—p 7
Testings of Chickens, Turkeys Increase ..... Sept. 30—p 4
USDA Comments on Big Broiler Output ..... Sept. 30—p 8

PRICES:
Continued Low Poultry Product Prices Predicted ..... Sept. 16—p 1
Court Investigation of Broiler Prices Started in Texas ..... Sept. 9—p 8
Georgia Poultry Federation ..... Sept. 9—p 1
Growers Step Up Marketing of Loss Turkeys ..... Sept. 9—p 1
Lower Soy Meal Prices Predicted ..... Sept. 9—p 1
Peg Egg, Livestock Prices for Year Ahead ..... Sept. 9—p 1
Sees Turkey Price Rise in November ..... Sept. 16—p 91
Soy Meal Prices Continue to Fall ..... Sept. 30—p 8
Up or Down ..... Sept. 16—p 92
Week's Markets See Broilers at 9c and Turkeys at 15c Lb. ..... Sept. 16—p 96

PRODUCTION & MILL OPERATIONS:
Costs of Stationary, Mobile Milling Compared ..... Sept. 9—p 44
Feed Production School ..... Sept. 16—p 1; Sept. 30—p 10
Methods of Determination of the Distribution of Ingredients in Feed Mixtures ..... Sept. 9—p 60
New Plant Improves Efficiency ..... Sept. 30—p 38
New Plant Supplies 125 Dealers ..... Sept. 9—p 18
Production Expansion Program ..... Sept. 9—p 40
Small Mill Workshop Conference ..... Sept. 23—p 10
Texas Broiler Firm Adds New Feed Milling Facilities ..... Sept. 9—p 76

PROTEIN:
Minnesota Nutrition Conference ..... Sept. 30—p 6
Mississippi Report on Poultry Research ..... Sept. 23—p 84
Poultry Science Assn. ..... Sept. 9—p 26
Putting Research to Work ..... Sept. 9—p 50
Swine Day (Missouri) ..... Sept. 30—p 78
Test Energy-Protein Levels for Layers ..... Sept. 30—p 72

QUALITY CONTROL:
Methods of Determination of the Distribution of Ingredients in Feed Mixtures ..... Sept. 9—p 60
USDA Scientist Devises Rapid Feed Test ..... Sept. 16—p 85

REGULATORY:
Application of Wage Law to Elevators ..... Sept. 9—p 8
Bacitracin-Penicillin Combination Asked ..... Sept. 9—p 7
Change Antibiotic Level Regulations ..... Sept. 9—p 7
Drug Use in Feeds for Turkeys ..... Sept. 9—p 46
Feed Control Comment ..... Sept. 16—p 76
FDA Action Ends Clearance Problem With Certain Concentrates ..... Sept. 30—p 4
FDA Gets Petitions for Feed Additives ..... Sept. 23—p 56
Kentucky Feed Conference ..... Sept. 9—p 6
Nystatin Petition Filed With FDA ..... Sept. 9—p 7
USDA Official Suggests Federal Feed Standards ..... Sept. 16—p 1

SERVICE:
Missouri Feed Firm Promotes Certified Meat-Type Hogs ..... Sept. 16—p 42
Who Keeps the Records? ..... Sept. 23—p 34

SHEEP FEEDING:
Three Studies on Fattening Lambs in Drylot Reported ..... Sept. 16—p 45

SOYBEANS:
Association Concerned About Bean Supply ..... Sept. 16—p 80
Galvin Estimates Soybean Bushelage at 738 Million ..... Sept. 9—p 4
Kentucky Livestock Field Days ..... Sept. 9—p 20
Minnesota Nutrition Conference ..... Sept. 30—p 6
Poultry Science Assn. ..... Sept. 16—p 26
USDA Offers Huge Lot of Soy Oil for Foreign Donation ..... Sept. 23—p 1
USDA Takes Action to Bull Soybean Market ..... Sept. 30—p 1

SOYBEAN MEAL:
Bean Meal, in Cat and Dog Race, Hits Year's Price Bottom ..... Sept. 23—p 1
Lower Soy Meal Prices Predicted ..... Sept. 9—p 1
Study Soybean Meal Effect on Dairy Cows ..... Sept. 30—p 62
Up or Down ..... Sept. 30—p 50

TAXES:
Most Feeds Exempt From Texas Sales Tax ..... Sept. 16—p 79
Pennsylvania Says Feed Millers Are Really Manufacturers ..... Sept. 9—p 7

TRANQUILIZERS:
Kentucky Livestock Field Days ..... Sept. 9—p 20

TRANSPORTATION:
TVA Says Traffic on Tennessee River Moving ..... Sept. 9—p 7

TURKEY FEEDING:
Minnesota Nutrition Conference ..... Sept. 30—p 6

UNIDENTIFIED FACTORS:
Poultry Science Assn. ..... Sept. 16—p 26

UREA:
Kentucky Livestock Field Days ..... Sept. 9—p 20

VACCINES:
Georgia Poultry Institute ..... Sept. 16—p 22

VITAMINS:
Colorado Study Shows Egg Matrix Changes During Hot Weather ..... Sept. 30—p 42
Hubbard Beef Day ..... Sept. 16—p 86
Kentucky Livestock Field Days ..... Sept. 9—p 20
Poultry Science Assn. Meeting ..... Sept. 16—p 26
Putting Research to Work ..... Sept. 16—p 38

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What Can Be Done About Condemnations?

RICHMOND, VA.—"Two broilers out of every 100 grown get tossed in the condemnation can. I'd estimate that condemnations this year will cost the broiler industry around $20 million. What can we do to whittle down this huge loss?," Dr. J. M. Snyder, Beacon Milling Co., Cayuga, N.Y., asked Virginia broilermen during a panel discussion at the Virginia State Poultry Federation convention in Richmond.

"First," he answered, "I'm sure we're all agreed that government inspection is a good thing. We want Mrs. Housewife to buy poultry meat with confidence. This she can certainly do with our present rigid program of government inspection."

Here are four things suggested to help producers in cutting down throw-outs: (1) Feed a good feed. (2) Manage right. (3) Medicate wisely. (4) Treat eggs (still in the experimental stage).

Good Feed—A good feed will help cut condemnations by keeping the birds healthy. There are many nutrients that are tied closely to the health of birds. One good example is vitamin A. Vitamin A helps to protect the cells that line the breathing tract. If the breathing apparatus of the bird is healthy, four fifths of condemnations can be cut.

It's been shown that the proper calorie-protein ratio helps keep birds healthy. The right amount of protein is very important since protein promotes healing. And a vitamin that helps fight off diseases is pantothenic acid, which builds disease-fighting antibodies in the blood stream.

Management—A recent survey by the University of Delaware and the University of Maryland shows that broiler management can affect condemnations. Here are some things the study shows: There are fewer condemnations in narrow houses than in wide houses. (Ventilation must be the reason.) More birds are condemned if the producer uses gas stoves than if he uses oil stoves. (Less dampness, and easier to hold the heat with oil stoves.) Broiler growers with solid partitions in their houses have fewer condemnations than when open partitions are used. Moreover, a good sanitation program (throwing away the old litter after each flock of birds) cuts down on condemned birds.

Medicate—Certainly sick birds should be medicated—assuming it's a disease that the medicine will really do a job on. It's here that the poultryman is smart to call in the services of his local poultry pathologist or poultry serviceman.

Some feed manufacturers have turned to the feeding of medicines continuously to help lick condemnation losses. Broad-spectrum antibiotics and certain furan compounds are being used. We at Beacon have stayed away from programs calling for continuous medication — except, of course, in the case of the coccidiostats, Dr. Snyder said. "We know of some feed manufacturers who have gone to a continuous medication program—only to cut it out later because it didn't pay for itself," he said.

Treating Eggs—"We believe that this matter of treating hatching eggs (soaking them) in antibiotic solution offers real promise. The idea is this: You treat the egg to kill the 'bugs' in the egg that later lead to diseases in the growing broiler.

"This is something that's brand new—and we don't have enough research under our belts to be sure of this program. Initial trials indicate: Treatment may be more effective for chicken eggs than for turkey eggs; you may run into a kind of egg-borne infection that isn't killed by a given antibiotic; it's also important that the right technique in dipping the eggs be used—otherwise, egg 'blow-ups' will result, and egg dipping is an expensive process—it'll cost about 1¢ per bird. At that rate, condemnations must be cut about 2% to pay for the dipping."

PLAN TO MARKET FROZEN FRENCH TOAST

WEST SPRINGFIELD, MASS.—Eastern States Farmers' Exchange, headquartered in West Springfield, has announced plans to produce and market frozen French toast.

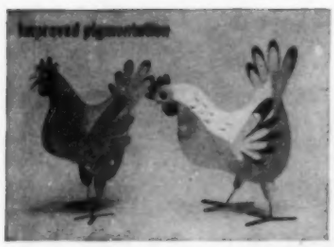
The frozen French toast will be made with formulas for bread and batter developed by Cornell University, for which Eastern States has the franchise to produce and sell in its territory.

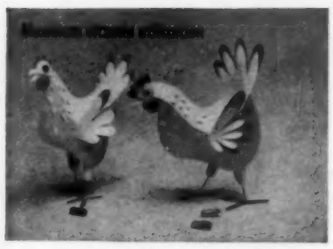
Eastern States has employed William E. Broeg and Associates, food consultant, to assist in research and development of food products that could become projects of its marketing division. At present, efforts are concentrated on developing products that would expand markets for eggs and poultry meat.

Howard Johnson, director of marketing, said frozen French toast sales will begin with an introductory merchandising campaign in a metropolitan area. Processed products from fowl will be next, he stated.

Your feeds supply these extra performance factors when they contain Tenox BHT (AGRICULTURAL GRADE)

an Eastman antioxidant for feeds





Here are four sound reasons for incorporating Tenox BHT-Agricultural Grade into your feeds.

Tenox BHT protects the all-important vitamin balance you build into your feeds.

Tenox BHT improves pigmentation in poultry by increasing the utilization of Vitamin A.

Tenox BHT increases weight gain by maintaining maximum nutritional content right up to the time the feed is used.

Tenox BHT protects poultry against certain deficiency diseases.

Tenox BHT-Agricultural Grade is free-flowing, non-dusting, non-caking. Its particle size is similar to that of other feed ingredients. It blends quickly and does not separate during handling or storage.

Tenox BHT-Agricultural Grade was developed to meet the specific needs of poultry feed manufacturers. It is the result of information provided by feed manufacturers combined with our own extensive knowledge of antioxidant performance.

Build extra performance into your feeds by specifying the antioxidant specially made by Eastman for feed use...Tenox BHT-Agricultural Grade. Tenox BHT-Agricultural Grade is available from leading distributors throughout the country. To find out how you can use this antioxidant in your feed formulations, write today to EASTMAN CHEMICAL PRODUCTS, INC., subsidiary of the Eastman Kodak Company, KINGSPORT, TENNESSEE.

Tenox BHT-Agricultural Grade available in 2 forms

1. Tenox BHT (Conc.)-Agricultural Grade which may be added to your own diluent.
2. 25% Tenox BHT Premix, containing 25% BHT on a nutritive cereal carrier.

SALES OFFICES: Eastman Chemical Products, Inc., Kingsport, Tennessee; Atlanta, Georgia, 3133 Maple Drive N. E.; Chicago, 4200 Dempster St., Skokie, Illinois; Cincinnati, 1626 Carew Tower; Cleveland, 13212 Shaker Square; Detroit, 17320 West Eight Mile Rd.; Framingham, Massachusetts, 65 Concord St.; Greensboro, North Carolina, 435 Jefferson Standard Bldg.; Houston, 1103 Prudential Bldg.; New York City, 260 Madison Ave.; Philadelphia, Fort Washington Industrial Park, Fort Washington, Penna.; St. Louis, 10 South Brentwood Boulevard. **West Coast: Wilson Meyer Co.,** San Francisco, 333 Montgomery St.; Denver, 851 North Broadway; Los Angeles, 2060 South Garfield Ave.; Phoenix, 111 West Osborn Rd.; Portland, 1430 W. Clay St.; Salt Lake City, 573 East Broadway; Seattle, 318 Queen Anne Ave. **Canada: Sedeo Chemicals,** Montreal, Quebec, 2143 St. Patrick St.; Toronto, Ontario, 41 Advance Rd.

Wirthmore Conducting Sales Training Schools

WALTHAM, MASS. — A sales training program for poultry and dairy feed salesmen will be conducted through December by Wirthmore Feeds, Inc., Waltham, under the direction of W. F. Warren, sales training supervisor. The meetings will consist of three one-day discussions with assignment work between each session. There will be a total of 21 schools for seven groups of salesmen and servicemen throughout Wirthmore's New England sales area.

The schools will feature improved sales techniques, better knowledge of Wirthmore products and services, and exchange of ideas that have proved successful in increasing sales.

REMEMBER TO ORDER

CHASE BAGS

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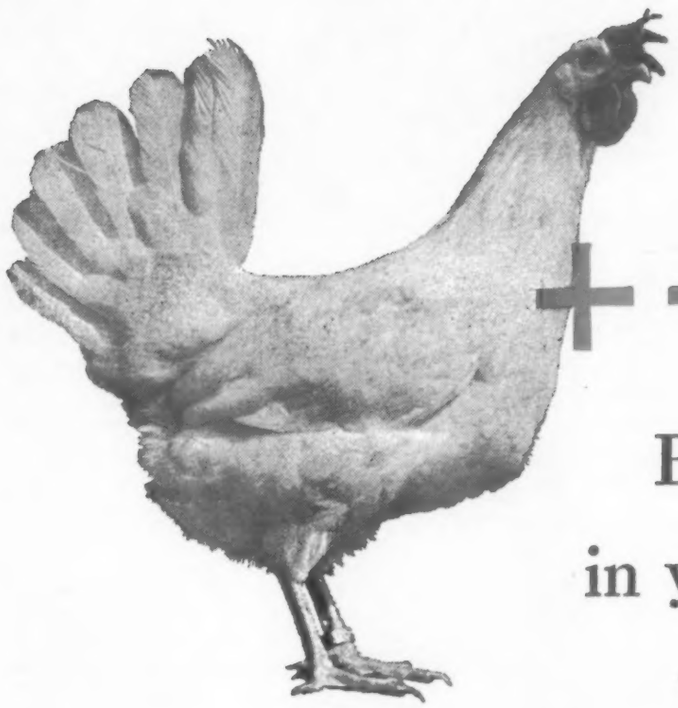

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Put more eggs in your layer feeds with Dawe's Vitamelk

There are more eggs in a ton and more profit for the poultryman, when you fortify your layer feeds with Vitamelk Egg. This specialized Vitamelk, developed by Dawe's Nutrition Research and Technical Service, provides the micronutrients essential to sustained high-level production.

Vitamelk Egg is a Dawe's quality-controlled premix of vitamins, trace minerals and unidentified factors at research-proved levels for high-efficiency layer feed performance. In Vitamelk Egg, you have full fortification in a single package. This simplifies your job of fortifying to make your feeds more productive.

More eggs in a ton of feed mean lower cost per dozen. This is the payoff for the poultryman. It is your payoff, too, because that is the basis on which your feeds are judged.

Talk layer feed fortification with your Dawe's man, or write for more information on Vitamelk and new concepts in layer nutrition.

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- layers
- breeders
- turkeys
- dairy
- beef
- swine

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DESCRIPTIONS OF NEW AND IMPROVED PRODUCTS AND SERVICES PROVIDED BY MANUFACTURERS AND SUPPLIERS ARE PRESENTED IN BRIEF FORM. FOR ADDITIONAL INFORMATION, PLEASE USE THE ACCOMPANYING COUPON.

No. 7753—Antibiotic Sales Premium

Merck Chemical division of Merck & Co., Inc., is packaging a four-quart electric ice cream freezer with every order of two 25 lb. drums of FloxAid antibiotic - vitamin drinking water booster for poultry. To be given between Nov. 1 and Jan. 31, the freezer, made of Marlex high density polyethylene, with a list price of $32.95, is watertight, rustproof, lightweight and virtually unbreakable.

With the purchase of a single 25 lb. drum of FloxAid, a hand-operated ice cream freezer made of Marlex, with a value of $13.95, will be packaged.

Each 25-lb. drum of FloxAid contains 75 5½ oz. plastic bags for convenient handling. FloxAid contains high levels of streptomycin, two forms of penicillin, and does not clog automatic fountains or water medication systems, according to the manufacturer. The antibiotic is designed to provide year-round stress protection for poults, broilers, replacements, layers and breeders.

For additional information, check No. 7753 on the coupon and mail.

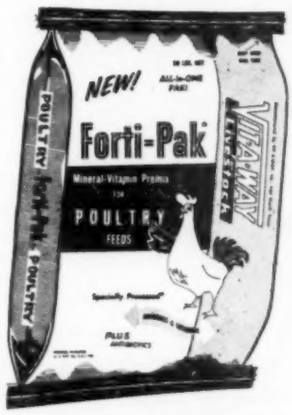
No. 7742—Premix Convenience Pack

A new style convenience package for premix vitamins and minerals has been announced by Vit-A-Way, Inc.

Called Forti-Pak, the manufacturer described the new development as the first complete mineral, vitamin and antibiotic fortification all in one package. Forti-Pak is made available for both swine feeds and poultry feeds. The swine feed package is 25 lb. in weight, and will fortify a ton of complete grower or fattener feeds. For starter feeds, two packages per ton are needed. No additional fortification is needed under normal feeding conditions, the manufacturer states.

The poultry feed package comes in 50-lb. size per ton of complete feed for poultry and turkey feeds. No added fortification is necessary, except that, in the case of breeder and layer feeds, additional calcium is required to meet laying requirements.

The package provides two compartments—one for the mineral premix, the other for the vitamin and antibiotic premix.



Vit-A-Way has issued a folder describing the Forti-Pak, and giving formulation charts for poultry and swine feeds. For a copy of this folder, check No. 7742 on the coupon and mail.

No. 7751—Screw Conveyor Brochure

Thomas Screw Conveyor and Accessories brochure, showing the complete line of steel, stainless steel, aluminum, brass and copper screw conveyors has just been published by Thomas Conveyor Co.

For a copy of the brochure, check No. 7751 on the coupon and mail.

No. 7744—Concentrate Storage Bin

Leach Manufacturing Co. is offering a four-compartment Lemanco on-the-farm concentrate bin with total capacity of 5.6 tons, 1.4 tons per compartment, 40 lb. per cu. ft.

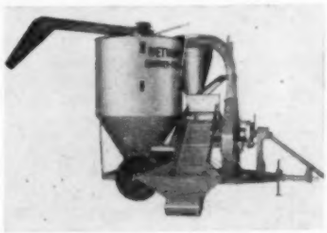
The bin has a large, weatherproof roof which opens from the ground to make filling easy. Built-in cross ventilation of the roof is designed to hold condensation to a minimum. The multiple compartments allow storage of four different types of feed if desired. Accepting feed in bulk has cost advantages as well as eliminating loss from rats and torn bags, and frees the feed room for other purposes, the manufacturer points out.

For additional information, check No. 7744 on the coupon and mail.

No. 7743—Portable Grinder-Mixer

A Wetmore Grinder - Mixer, now available, grinds, mixes and distributes formula feeds on the farm or feedlot at a minimum of time, labor and expense, according to the manufacturer. It mixes to specific formulas for beef or dairy cows, pigs, hogs, sheep or poultry, providing freshly mixed feeds when needed.

The unit grinds hay in all conditions, and is said to handle hay flakes as fast as two men can throw them into the feeder hopper. It grinds corn (snapped, ear or shelled) and other grains and grain sorghums to desired fineness, and makes possible utilization of all home grown grains and roughages.



The Wetmore Grinder-Mixer combines the 350 knife-type hammermill with a mixing mechanism operating within the heavy duty 82 bu. mixing tank. A large, low-set concentrate hopper between the mill and tank makes the adding of concentrates easy, according to the manufacturer.

For additional information, check No. 7743 on the coupon and mail.

No. 7746—Poultry Watering Trough

A combination watering trough for the poultry industry is now offered by the L. A. Pockman Manufacturing Co. The trough is specially rolled to grip and hold a noncorrosive plastic liner which fits snugly into the trough inlet. Improvement in watering trough connectors has also been made, being preformed for greater ease of assembly, the manufacturer says.

For additional information, check No. 7746 on the coupon and mail.

No. 7750—Foot Rot Bulletin

A bulletin giving information on causes, symptoms and treatment of foot rot is available from William Cooper & Nephews, Inc.

The company has just announced a new preparation designed to give relief from foot rot after one application. Called Cooper Foot Rot Liquid, the medication is applied on the area of infection. When foot rot is detect-

Send me information on the items marked:

- ☐ No. 7742—Premix Pack
- ☐ No. 7743—Grinder-Mixer
- ☐ No. 7744—Storage Bin
- ☐ No. 7745—Cholera Bacterin
- ☐ No. 7746—Watering Trough
- ☐ No. 7747—Poultry Vaccines
- ☐ No. 7748—Clearing Valve
- ☐ No. 7749—Slide Diverter Valve
- ☐ No. 7750—Foot Rot Bulletin
- ☐ No. 7751—Conveyor Brochure
- ☐ No. 7752—Bag, Carton Printer
- ☐ No. 7753—Sales Premium
- ☐ No. 7754—Brochure on Equipment
- ☐ No. 7755—Make-up Air Units

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Feedstuffs

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Reader Service Dept. Minneapolis 40, Minn.

ed, instructions say the infected foot should be cleaned and pared thoroughly, all foreign material and dead tissue should be removed, and the liquid applied. The animal should then be kept on clean straw, dry ground or a hard floor for approximately an hour after application. One application is usually sufficient, the company states.

For a copy of the bulletin, check No. 7750 on the coupon and mail.

No. 7747—Poultry Vaccines

L & M Laboratories now has available a complete line of poultry vaccines marketed under the trade name of the "Blen" line. The firm states that every effort has been made to incorporate the latest developments from research in the production of vaccines.

Available are: "New-Blen," a B-1 type Newcastle vaccine; "Bron-Blen," an entirely new product said to broaden protection against bronchitis by blending virus strains; "NB-Blen,"

a combination Newcastle-bronchitis vaccine; "TRA-Blen," a laryngotracheitis vaccine; "NT-Blen," a combination Newcastle and laryngotracheitis vaccine, and "POX-Blen," a mild pox vaccine.

The company says the vaccines have been used in millions of birds in various areas of the U.S., and have proved effective.

For additional information, check No. 7747 on the coupon and mail.

No. 7754—Brochure On Equipment

A 12-page, two-color bulletin describing the complete line of grinding, air conveying and dust collection equipment of Pulverizing Machinery Co. has been released. Included are details on capacities and uses for grinding units and facts on an automatic load controlling system for increased grinding production.

Also featured is a dust collector with the new "Bin Vent Pulsaire" for special mounting applications. Accessories are also covered.

For a copy of the bulletin, check No. 7754 on the coupon and mail.

No. 7752—Bag, Carton Printer

A bag and carton printer has been introduced by Minneapolis Sewing Machine Co. for in-plant printing of private label bags and cartons, and to replace hand stenciling.

Self-starting and stopping by electric switches and easy-to-change type and rolls eliminate the need of using skilled manpower to operate the machine, according to the company. It is completely adjustable, prints from 1-12 or more lines of type at the rate of 45 bags per minute, type centers

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With Less Labor
Using the
Recipro-Matic Feeder
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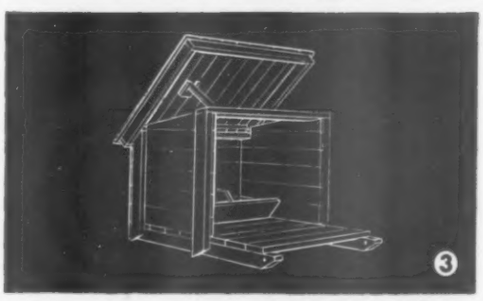
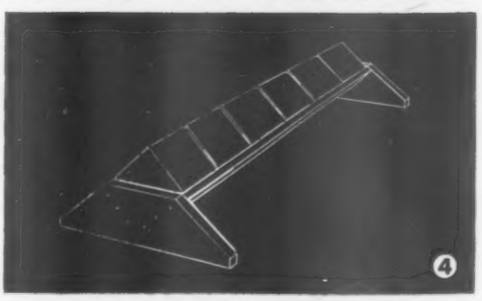
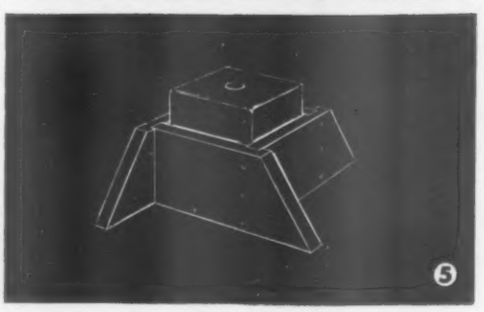
FROM MORTON
FOR YOUR CUSTOMERS!







PLANS FOR FIVE INEXPENSIVE, EASY-TO-BUILD PORTABLE SALT AND MINERAL FEEDING STATIONS

Here's a valuable free service you can offer your customers—which will also be an important sales-builder for you!

These safe, simple and long-lasting feeding stations were designed by Morton four years ago. Since then, thousands have been built from these plans, distributed through Vo-Ag teachers and County Agents. Now we're offering them—*through you*—to the farmers and stockmen of America!

These plans will be advertised in full-page ads in leading farm magazines. But your customers will have to come to you to get them! Contact your Morton Representative for your free supply now—or write Morton Salt Company, 110 N. Wacker Drive, Chicago 6, Illinois.

❶ CATTLE FEEDER Has divided mineral box that can be removed for cleaning. Can be moved on sturdy skids to any part of range or pasture.

❷ SHEEP FEEDER Mineral box is low enough for lambs, and rounded edge will not harm fleece.

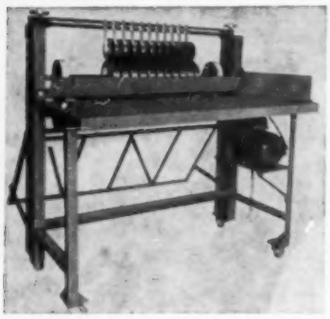
❸ HOG FEEDER Wide roof overhang keeps minerals dry. Roof is hinged and braced for easy cleaning.

❹ MULTIPLE BLOCK FEEDER Keeps salt and minerals off the damp ground, prevents "wet bottom" block waste.

❺ BLOCK HOLDER Eliminates dangerous metal stake block holders—build this block box from a single length of 2 x 10!

HIGHER PROFIT FOR YOU...FASTER GAIN FOR YOUR CUSTOMERS

MORTON
TRACE-MINERALIZED
SALT



print in any position desired, and different colors of ink can be used for each line.

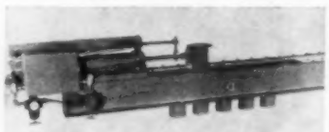
Self-inking rolls will print thousands of bags before needing replacing. Red, violet and black ink colors are available. The standard machine will handle bags 10-44 in. long and 9-23 in. wide.

For additional information, check No. 7752 on the coupon and mail.

No. 7749—Slide Diverter Valve

A slide diverter valve has been developed by Sprout, Waldron & Co., Inc. The unit has been constructed to prevent leakage and binding, and has been engineered to provide perfect alignment, the manufacturer states.

Valves are available for conveying line sizes up to 10 in. in diameter, depending on the number of outlets desired. Smaller valve sizes can be equipped with seven outlets, while the largest size can be used with a two-way outlet. Both motor-driven and air-operated units can be furnished to fit any NEMA requirements.



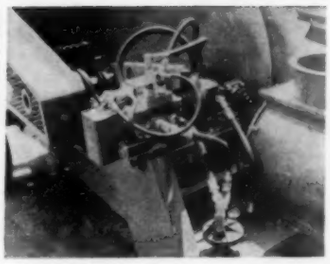
The valves have been tested in a large number of installations over the past six months, and thousands of tons of ingredients have been handled successfully, the manufacturer states.

For additional information, check No. 7749 on the coupon and mail.

No. 7748—Automatic Clearing Valve

A fully automatic clearing rotary valve which clears foreign matter from the air lock without stoppage or manual attention is now available for new Grainvayors, the manufacturer, Myers-Sherman Co., announced. The company also made the valve available in kit form for converting Grainvayor units now in use.

According to the company, the valve reverses and clears itself if foreign matter stops it. The new design makes it unnecessary to pull a reversing lever. Over 99% of small objects which are known to cause such stoppages are automatically cleared by the new valve, the manufacturer states.



For additional information, check No. 7748 on the coupon and mail.

No. 7745—Fowl Cholera Bacterin

A new type of cholera bacterin, which in field tests on more than 1 million chickens and turkeys was found to be "highly effective" in treating the disease and as a preventive vaccine, has been made available by Dorn & Mitchell Laboratories, Inc.

According to the manufacturer, the bacterin's extremely fast development of protective action, due to its unique formulation, permits it to be used effectively both in acute outbreaks of fowl cholera and for preventive treatment. Field and laboratory data have demonstrated that protection is effective and long lasting, the manufacturer states.

For additional information, check No. 7745 on the coupon and mail.

No. 7755—Make-up Air Units

The Propellair Division of Robbins & Myers, Inc., has designed a new Type MG make-up air unit—a self-contained, gas-fired device for introducing comfort-tempered air into working areas. The unit was designed to eliminate the problems of unbalanced ventilating systems and negative building pressures encountered by industry in the winter.

Three basic sizes, providing a total of six different ratings are available. Other sizes and ratings may be obtained for special applications. Controls also enable units to be used for hot weather breeze cooling.

For additional information, check No. 7755 on the coupon and mail.

Also Available

The following new products have been described in previous issues of Feedstuffs and information about them may still be obtained by jotting the appropriate number of the coupon and forwarding it to Feedstuffs.

No. 7684—Feed flavoring handbook, Flavor Corp. of America.

No. 7685—Tramp Iron Drum Separator, Eriez Manufacturing Co.

No. 7686—Bulk truck, Winger Manufacturing Co.

No. 7687—Calf raising handbook, Wirthmore Feeds, Inc.

No. 7688—Base for calf milk replacers, Borden Special Products Co.

No. 7689—Antibiotic for swine, Elanco Products Co., Div. of Eli Lilly & Co.

No. 7690—Horizontal batch feed mixer, Sprout, Waldron & Co., Inc.

No. 7691—Pfizer activity review booklet, Chas. Pfizer & Co., Inc.

No. 7692—Fluid pump, Clayton Manufacturing Co.

(Turn to page 84)

Announcing the NEW Superior

TEMPLEWOOD

PORTABLE FEED PELLETIZER

★ *Produces cubes and pellets from dry mash mixtures—without steam.*

★ *Ideal for small feed mills, dairies, feed lot operators and big hog and poultry operations.*

Whether you run a small feed mill or your own big feeding operation, take a good look at this new Portable PELLETIZER—and add up the advantages it gives you.

Reasonable cost . . . flawless operation . . . production up to 750 lbs. per hour . . . a choice of 6 pellet sizes . . . and you can move it around anywhere, anyplace, anytime!

Tests prove pelleting saves feed, prevents wastage, cuts costs and helps stock make faster gains. The Superior-Templewood Portable Pelletizer gets you these advantages without a big investment and without complicated bins, steamers, mixers and feeders needed for big pelleter installations. Backed by 35 years experience in the field of cold-pelleting without the use of steam.

Get the FACTS for profits.

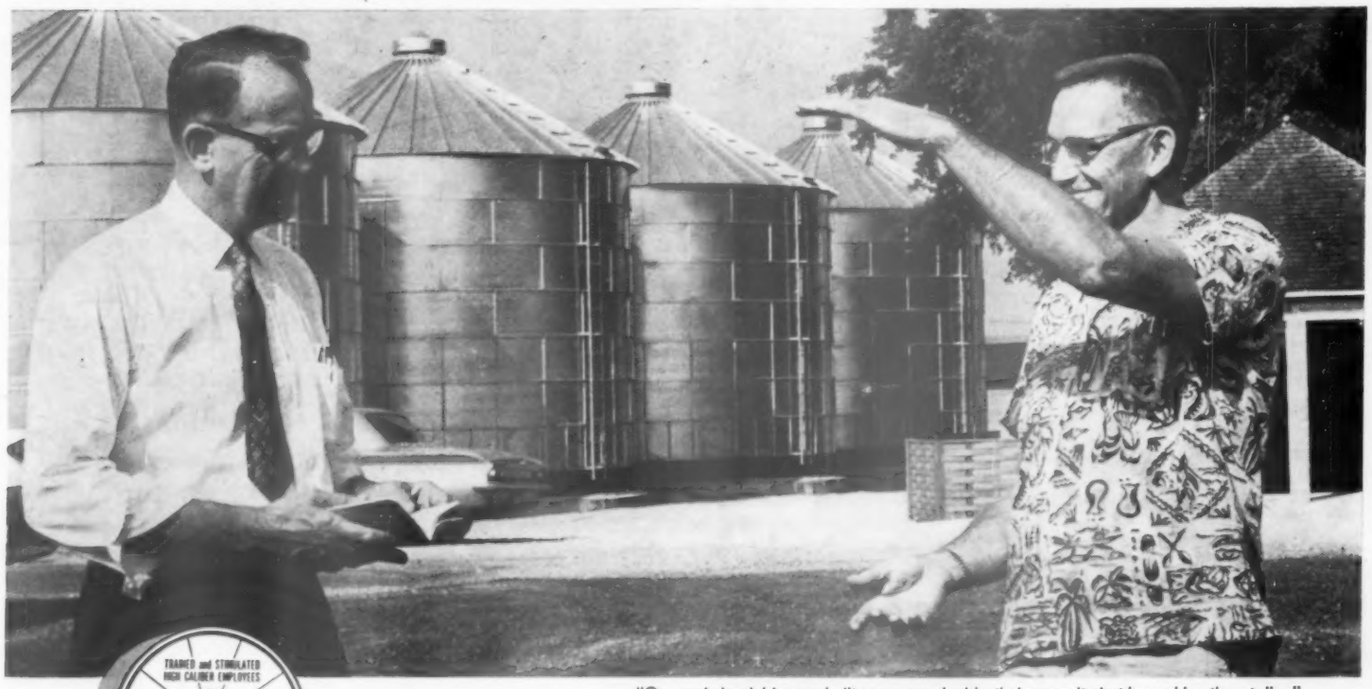
Load it right into a pickup truck

Superior GRAIN FEED SEED PROCESSING EQUIPMENT

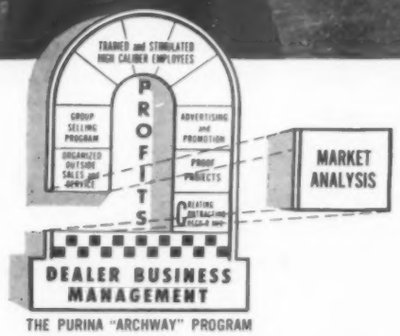
Superior Division of Daffin Corporation, Hopkins, Minnesota

Fleischmann's F·I·D·Y IRRADIATED DRY YEAST RICH IN VITAMIN D FOR FOUR-FOOTED ANIMALS

Meeting the challenge of the '60's with service



"Our grain bank bins are built so we can double their capacity just by making them taller," says Manager Schwartz (right) to Purina "Sales Partner" Bilgrien.



THE PURINA "ARCHWAY" PROGRAM

Purina Dealer's grain bank helps progress in agriculture

When Gary Schwartz, manager of Ixonia Farm Product Company, and his "Sales Partner" H. E. Bilgrien, Purina Salesman, took a look at the southeastern Wisconsin market, they saw a need for a new service to the farming community.

A grain bank was needed to help farmers make better use of their corn and oats, crops which were increasing to replace malting barley. "Sales Partner" Bilgrien and Manager Schwartz visited grain banks in Illinois and Ohio . . . talked over the problem with Purina executives in St. Louis . . . and had experts from Purina's Planning Department visit Ixonia.

After careful planning, Ixonia Farm Product Company added grain banking to its super service center in 1952 and expanded it by 40,000 bushels to a total capacity of 72,000 bushels this year.

Proof of the need, revealed by knowledge of the market, is seen in the new customers coming to Ixonia and in the growing volume from established patrons.

* * * * *

WHY THE PURINA FRANCHISE IS THE MOST SOUGHT RURAL RETAIL OPPORTUNITY

1. Dealers who follow the Purina Archway Program realize worthwhile profits on their investments.
2. Purina offers a well-rounded money-management program for Dealers.
3. The Checkerboard is rural America's best-known trademark.
4. There's a Purina Chow especially adapted to every livestock and poultry production situation.
5. Purina offers complete programs of breeding, management, sanitation and feeding.
6. Dealers are backed by one of the world's outstanding commercial research facilities.
7. Purina provides a complete line of research-proved sanitation products.
8. A coast-to-coast network of Mills serves Purina Dealers.
9. The Purina Salesman and the Dealer have a "Sales Partnership" relationship.
10. The Ralston Purina Company is the world's largest feed manufacturer.

There are progressive, independent Purina Dealers covering most areas. If you are in one of the few remaining markets where the Purina Franchise is available . . . and if you are interested in an outstanding investment opportunity, write: RALSTON PURINA COMPANY, Department F-111, St. Louis 2, Missouri.

"SALES PARTNERS" SCHWARTZ and **BILGRIEN** have planned the Ixonia grain bank to meet the needs of progressive agriculture in the area. It helps farmers with their grain storage, assuring them that they will draw out grain of the same quality deposited.

Combined with Check-R-Mix service of the Ixonia Dealership, the grain bank is helping farmers get better results through improved feeding of dairy, cattle and hogs.

PURINA...YOUR "PARTNER" IN SERVING ANIMAL AGRICULTURE

How these breeders control disease to improve income per hen

SPECIAL REPORT ON nf-180 PROTECTIVE FEEDING FOR BREEDERS

By protecting against disease troubles, these turkey raisers get more eggs per hen, improved hatchability . . . and make considerably more money from their breeder flocks! Here's how you can do the same with nf-180 protective feeding: As soon as you select your breeders, put them on a ration containing 100 grams furazolidone (nf-180) per ton of total feed. (In flocks where paracolon and paratyphoid are serious problems, a 200-gram level is recommended.) After 2 weeks, switch to a feed containing 50 grams furazolidone, and keep breeders on this level through the laying season. In case of severe stress, put birds back on the 100-gram furazolidone level until the danger has passed.

Every one of these people make good money from breeder flocks. They're in the turkey business to stay! Part of their success is due to recognizing the protective feeding value of nf-180 . . . to looking at the *return* from nf-180, not just the cost.

They will tell you, without reservation, that nf-180 protective feeding really works! They've seen it work. They've seen nf-180 free hens from constant disease drag . . . help hens produce better-hatching eggs and reduce the chance of egg-transmitted disease.

There's a good reason for this profitable breeder performance: *nf-180 prevents and controls more turkey diseases than any other medication.* It is effective against typhoid, pullorum, hexamitiasis, blackhead, paratyphoid, bluecomb, quail disease, CRD (air sac complex), synovitis and paracolon.

Here, in tape-recorded interviews, is what users say about nf-180 protective feeding.

A. J. (Bill) Koberlein, Lincoln, California

A 12-year veteran in turkey raising, Bill Koberlein runs about 18,000 birds a year. From this flock he selects 6,000 breeders. Accurate records on a new strain of 2350 breeders show he averaged 128 eggs per bird over a 255-day laying period.

"Just as soon as I put them on breeder feed . . . about a month before they come into production . . . I add 50 grams of furazolidone to a ton of feed. And I keep it at that level throughout the laying season. We haven't had any mortality — mortality is nothing. It wouldn't be possible to get turkeys to look like these look and lay like these lay if I didn't have nf-180 in the feed."

Shirley Miller, Springfield, Missouri

As president of Miller Feed and Farm Supply, Shirley Miller supplies turkey feed for 175,000 meat birds in

A. J. Koberlein: "It wouldn't be possible for turkeys to lay like these without nf-180 in the feed."

his trade area. In combination with his own 5,000 breeders, this double exposure gives him a continuous opportunity to observe how well various medications pay off right on the farm. He says:

"We've had good results . . . outstanding results, I would say . . . with nf-180 for breeders. We start breeders out on a 100-gram level of furazolidone for 2 weeks, then go to a 50-gram level. We get 6 to 8 more eggs per hen plus higher hatches for $1 more return per hen.

"We can expect stronger poults with letter livability to 10 days of age. We insist the hatcheries, where we buy poults, have nf-180 in their breeder programs."

Ruby R. Ables, Bolivar, Missouri

Owner of Ables' Hatchery & Turkey Farm, Mr. Ables started using nf-180 for his 18,000 Bronze breeders and

S. E. Miller: "... outstanding results with nf-180."

Ruby Ables: "nf-180 cuts mortality."

Mina Lee Mitchell: "I get my money back many times."

Walter Schwedler: "better lay, better hatchability."

4,500 Beltsville breeders a year ago. He quickly noticed reduced disease . . . lower mortality. Now he says:

"We put our breeders on nf-180 and keep them on it continuously. We have better turkeys with less mortality. We have good hatchability. Early in the season we hatch around 90%, and haven't had the disease problems we had before. We think nf-180 holds down bluecomb and blackhead. We urge customers to use nf-180 continuously. Last year we had a lot of compliments on the high livability of our poults. We give nf-180 credit."

Mina Lee Mitchell, Midlothian, Texas

Miss Mitchell raises from 10,000 to 20,000 turkeys a year, from which have come grand and reserve champions and the world's champion in 1960. She says:

"A couple of years ago we had some extremely bad weather just as our hens were coming into production. Egg production was going down and we needed to do something, so we fortified our feed with nf-180. Production came back up and we lost no turkeys. We liked it so well that we've continued to use it.

"During stress periods, nf-180 keeps birds looking good and on-feed. Many times we get 75-77% hatchability. I am really sold on nf-180. Except for a little worming medicine, it's the only medication I use. nf-180 costs but I get my money back many, many times."

Walter Schwedler, Portland, Oregon

Supervising the management of breeding flocks that produce 4 million hatching eggs a year . . . plus 65,000 market birds . . . Schwedler says:

"We don't leave disease control to chance at all. When you work with a lot of people, you have to have a pretty positive program to avoid the effects of disease. We're a firm believer that nf-180 pays. It keeps hens in excellent health . . . promotes real good lay and real good hatchability . . . and reduces disease.

"We like to have our growers start with a prebreeder ration containing a 200-gram level of furazolidone. This high level helps the hen overcome stress at the start of lay and seems to get her started off better. After 1 week of feeding nf-180 at the high level, we recommend a continuous 50-gram level of furazolidone in the feed."

This is the year to work for every added efficiency you can. Give nf-180 a try on part or all of your breeder birds.

nf-180®
Brand of furazolidone

HESS & CLARK
ASHLAND, OHIO
Division of Richardson-Merrell Inc.
NT-1-26

QUICK ANALYSIS—Work has been started by this subcommittee of the Feed Production School, Inc., Kansas City, investigating quantitative techniques for in-plant quick analysis of ingredients and finished feeds. It is planned that the group will place first emphasis on protein analysis with stress on methods offering better control of protein and greatest possibility for financial savings. Shown above, from the left, are: Dr. Harry B. Pfost, Kansas State University; Elmer Modeer, Spencer Kellogg Division of Textron, Inc.; Robert Wornick, Chas. Pfizer & Co.; Loren Burns, Mel Miller & Co. (chairman), and G. D. Miller, Kansas State University.

No. 7693—Lightweight bin vibrator, Martin Engineering Co.

No. 7694—Equipment leasing plan, Nationwide Leasing Co.

No. 7695—Promotion for mastitis medication, The American Cyanamid Co.

No. 7696—Dried beet pulp, The I. S. Joseph Co., Inc.

No. 7697 — Equipment brochure, Edw. Renneburg & Sons Co.

No. 7698 — Pneumatic conveying system, Sprout, Waldron & Co., Inc.

No. 7699—Fortification of feedlot rations, Vit-A-Way, Inc.

No. 7700 — Suspended separation magnets, Indiana General Corp., Stearns Division.

No. 7701 — Conveying, tubing elbows, Systems Engineering & Manufacturing Co.

No. 7702—Temperature measuring system, Radson Engineering Corp.

No. 7703—LP-Gas stock tank heater, Brower Manufacturing Co.

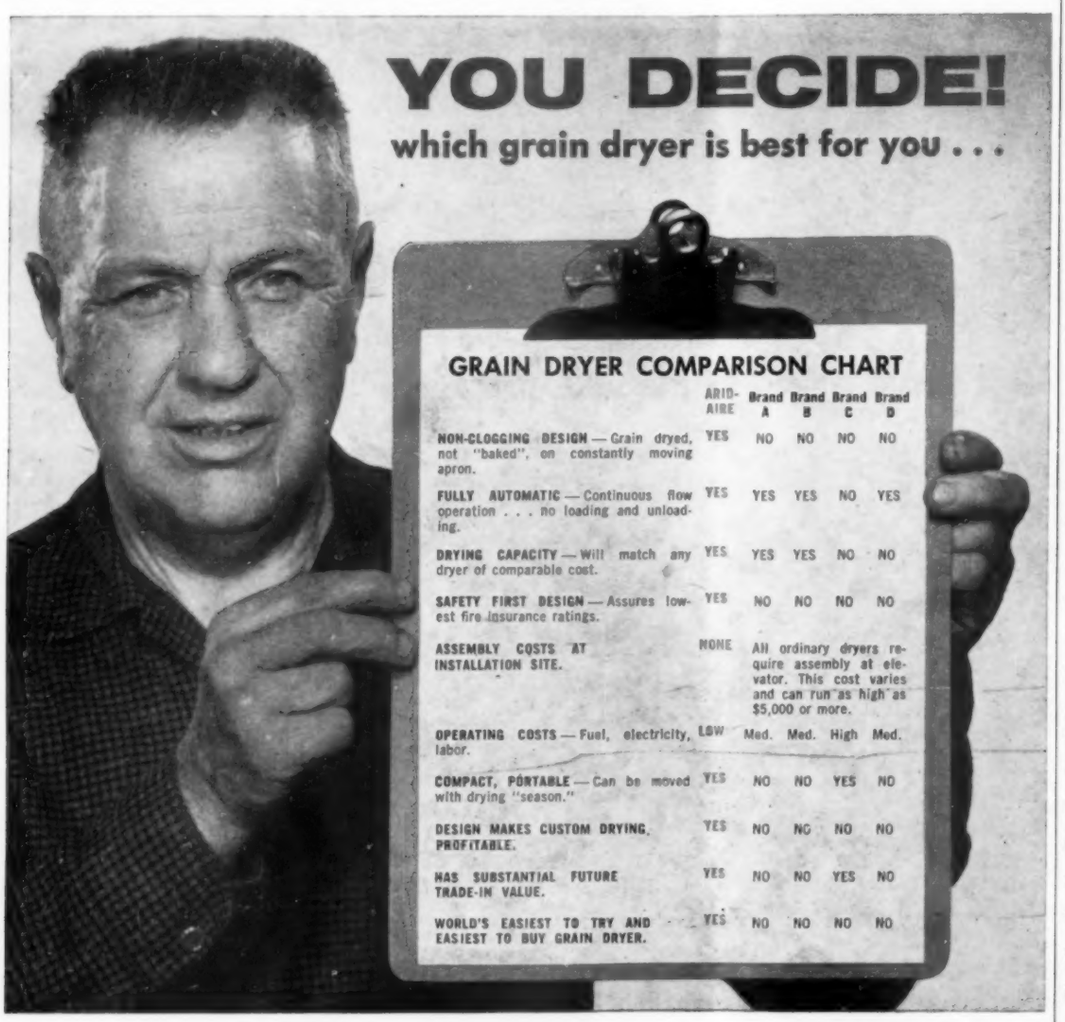
No. 7704 — Pressurized bulk feed truck, Sprout, Waldron & Co., Inc.

CAMPAIGN PROMOTES GIFTS OF MEAT

CHICAGO — Through the utilization of new, colorful "Give Meat for Christmas" promotional materials the various branches of the livestock and meat industry are attempting to step up consumer demand for plentiful supplies of meat before and during the holiday season.

The National Live Stock and Meat Board says, "Valuable merchandising aids of all sizes and shapes offer wholesalers, purveyors, livestock growers and feeders, retailers, meat packers and marketing agencies the opportunity for active participation in the annual holiday campaign designed to encourage giving of meat as gifts by business firms and individuals."

The promotional materials are distributed by the National Live Stock and Meat Board, 407 South Dearborn Street, Chicago 5, Ill.



	ARID-AIRE	Brand A	Brand B	Brand C	Brand D
NON-CLOGGING DESIGN — Grain dryed, not "baked", on constantly moving apron.	YES	NO	NO	NO	NO
FULLY AUTOMATIC — Continuous flow operation . . . no loading and unloading.	YES	YES	YES	NO	YES
DRYING CAPACITY — Will match any dryer of comparable cost.	YES	YES	YES	NO	NO
SAFETY FIRST DESIGN — Assures lowest fire insurance ratings.	YES	NO	NO	NO	NO
ASSEMBLY COSTS AT INSTALLATION SITE.	NONE	All ordinary dryers require assembly at elevator. This cost varies and can run as high as $5,000 or more.			
OPERATING COSTS — Fuel, electricity, labor.	LOW	Med.	Med.	High	Med.
COMPACT, PORTABLE — Can be moved with drying "season."	YES	NO	NO	YES	NO
DESIGN MAKES CUSTOM DRYING PROFITABLE.	YES	NO	NO	NO	NO
HAS SUBSTANTIAL FUTURE TRADE-IN VALUE.	YES	NO	NO	YES	NO
WORLD'S EASIEST TO TRY AND EASIEST TO BUY GRAIN DRYER.	YES	NO	NO	NO	NO

Owners Viewpoint:

"After we began drying grain with ARID-AIRE, both state and county ASC office have never refused to accept our dried corn for sealing. They also have taken all our dried grain sorghum. Feed processors making turkey feed have never complained and have always accepted our dried corn for their feeds."

GEORGE ARNOLD
Davis Elevator Co.
Denhart, Iowa

Before you buy, compare ARID-AIRE with any other grain dryer made!

Feature for feature, point for point, *compare* the ARID-AIRE Grain Dryer with any other on the market today. You'll see why ARID-AIRE is not just equal — but *superior* to every other brand. Before you buy any grain dryer, talk to an ARID-AIRE representative or talk to an ARID-AIRE owner! You'll be more convinced than ever that ARID-AIRE is today's soundest grain dryer investment!

Before you buy any grain dryer get the facts about ARID-AIRE. Write today for free literature and details about the ARID-AIRE Trial Plan.

DAYCOM, INC.

159 No. Bryant Ave. • Minneapolis 3, Minn. • FE 6-9671

No. 7705—Belt selection guide, The Imperial Belting Co.

No. 7706—Fiberglas storage tanks, Tryco Manufacturing Co., Inc.

No. 7707—Continuous weighing system, Industrial Powertronix, Inc.

No. 7708—Automatic control panel, Thayer Scale Corp.

No. 7709—Sow milk tablets, Agri-Tech, Inc.

No. 7710—Bulk scale, Burrows Equipment Co.

No. 7711—Portable loader, Ft. Worth Steel & Machinery Co.

No. 7712—Livestock tablets, Myzon Laboratories.

No. 7713—Poultry house heater, Electronics, Inc.

No. 7714—Antibiotic treatment for livestock, Abbott Laboratories.

No. 7715—Grain drier literature, Aeroglide Corp.

No. 7716—Steam generator, Clayton Manufacturing Co.

No. 7717—Steel building booklet, The Columbian Steel Tank Co.

No. 7718—Bulk feed bin, Chore-Boy Manufacturing Co.

Grain Moisture Study, Radson Engineering Co., Macon, Ill.—25¢

No. 7719—Self-service rodent killer, Vineland Laboratories.

No. 7720—Portable pneumatic conveyor, The Buhler Corporation.

No. 7721—Mobile feed mill route literature, Seco, Inc.

No. 7722—Service and equipment brochure, General American Transporation Corp.

No. 7723 — Grain drying bulletin, Farm Fans, Inc.

No. 7724 — Grain temperature probe, Douglas Chemical Co.

No. 7725 — Plastic egg collection flat, Automatic Poultry Feeder Co.

No. 7726 — Scale control system, Cardinal Scale Manufacturing Co.

No. 7727 — Pig starter additive, Thompson-Hayward Chemical Co.

No. 7728 — Molasses pellet mill, Sprout, Waldron & Co., Inc.

No. 7729 — Poultry house plans, Keen Manufacturing Corp.

No. 7730 — Hog disease control guide, Vineland Laboratories, Inc.

No. 7731—Baler twine, Sheilbuilder Co.

No. 7732 — Polyvalent bronchitis fraction, Delaware Poultry Laboratories, Inc.

No. 7733 — Protein concentrate, Knudsen Creamery Co.

No. 7734—Dehydrated alfalfa booklet, American Dehydrators Assn.

No. 7735—Formulation service, Peter Hand Foundation.

No. 7736 — Continuous flow grain dryer, Ace Supply & Equipment Co., Inc.

No. 7737—Literature on die cover, Sprout, Waldron & Co., Inc.

No. 7738—Portable moisture tester, Seedburo Equipment Co.

No. 7739—Booklet on dehydrated alfalfa, American Dehydrators Assn.

No. 7740 — Polyethylene valve insert, Union Bag-Camp Paper Corp.

No. 7741—Grain storage building, Butler Manufacturing Co.

NEWS BULLETIN

MERCK

Amprol may now be fed to broilers right up to marketing . . . with no withdrawal! This means:

- Coccidiosis protection with just *one* top coccidiostat and *one* feeding schedule . . . from day-old to slaughter
- No juggling of feeding schedules—one less feed inventory to handle; one less feed delivery to be made

Amprol®
(amprolium)

MERCK CHEMICAL DIVISION, MERCK & CO., INC., RAHWAY, N. J.

Poultry Problems Discussed, Marketing Orders Opposed by Indiana Convention

INDIANAPOLIS — Problems of business management, economics, personnel, quality control and poultry husbandry were discussed at the 43rd annual meeting of the Indiana State Poultry Assn. here.

The association passed a resolution taking a stand against government controls and marketing orders for the poultry industry.

The resolution encourages all government agencies concerned "to correct at the earliest possible date programs and actions which have aggravated the over production . . .," and it asks that "the federal government enforce and utilize existing laws and regulatory powers to correct these abuses."

The association also authorized its executive secretary to "immediately set up area meetings within the state to assist in getting information to the poultry industry people on turkey marketing orders, marketing orders in general and how they may apply."

Assistance from the school of agriculture, Purdue University, has been secured in conducting these meetings as have officials of the various sections of the department of agriculture involved in proposed programs.

Introductory in the resolution were statements which said the over production problem has been aggravated by certain abuses, one of which is "easy credit from some governmental agencies which has facilitated expansion."

Other factors in the over production problem were cited:

"The trend of the current administration towards government controls has encouraged expansion in order to build up large quotas; the two price system of the chain grocery stores in selling poultry products one week at a loss, then raising the price to an unrealistic markup for the next week causing a variable demand; certain income tax laws make it possible for those with large incomes to invest money in poultry projects, and any losses will be shared by the federal government in tax deductions, and certain accounting procedures such as reporting income on a cash basis make it possible to expand from profits without paying income taxes."

In other convention activity, the Golden Egg Award, the association's recognition for outstanding efforts in behalf of the poultry industry, was given to Vere Cochran, Portland hatcheryman, the retiring president.

Robert C. Graham, Jr., Graham Bros., Inc., Washington, Ind., was elected president for the next year. Russell Breeden, O-Hi-View Hatchery, Leavenworth, was elected chairman of the baby chick department, and Lewis Cooper, Rockport, and Marvin Mann, Frankfort, were elected chairmen of the broiler and turkey departments, respectively.

Financial Illiterates

Prof. Robert R. Dince, school of business, University of Georgia, Athens, challenged poultrymen in general, calling them "a bunch of financial illiterates." A basic problem of the poultry industry, he said, is that the production firms are short of capital. "They fall short on practically all financial ratios commonly used as standards in accounting."

He pointed out a number of ways by which conservative, long term financing could be obtained, but emphasized the importance of developing really meaningful accounting statements if capital is to be attracted.

bROILER ROUND TABLE—Participants in a round table discussion at the Indiana State Poultry Assn. meeting in Indianapolis were, left to right, J. W. Sicer, standing, Purdue University, moderator; Dr. L. A. Wilhelm, director of poultry development and marketing research, Quaker Oats Co.; Prof. Robert R. Dince, school of business, University of Georgia; Dr. Richard Kohls, agricultural economics department, Purdue, and Frank G. Wollney, Institute of American Poultry Industries. The panel pointed out there is a strong possibility that broiler production would tend to revert back near to consumption centers during the next 10 years.

Other Troubles

In a broiler industry round table discussion with Mr. Dince, Dr. L. A. Wilhelm, Quaker Oats; Dr. R. L. Kohls, Purdue, and Frank Wollney, Institute of American Poultry Industries, as panelists and J. W. Sicer, Purdue, as moderator, it was brought out that while over production is a fundamental cause of the industry's troubles today, it is only one of several serious problems. Inter-regional competition (one area reportedly having a production cost of 10½¢ to 11¢ lb.), chain store pricing, corporate organization, transportation rates, possible market orders, all came in for discussion.

Mr. Wollney, in his talk on "The Government—Your Business and What You Can Do About It," raised the question of the effect of large feed manufacturing companies taking over extensive poultry processing organizations.

A big task of managers today, stated Vince Bergman, sales training manager of the Ralston Purina Co., is to train employees how to do their jobs the way the boss wants them done. Mr. Bergman emphasized the importance of putting more into the job than you take out—more effort, more time, more thought, worry, imagination, hard work and devotion.

Richard M. Hanson, Corvallis, Ore., first vice president of American Poultry & Hatchery Federation, spoke on "Programming Information Into Poultry Operations." He illustrated how algebraic formulas could be useful in planning, and told of the use of electronic computers in linear programming.

Predicts Less Profits

In a talk on industry outlook, Dr. Kohls, agricultural economist of Purdue, stated that the laying flock for the year now beginning will be substantially less profitable than for the year just past. Currently, an atmosphere is developing that could mean substantial over-production will develop after mid-year. Broiler supply cut-backs now in the making should mean improving prices and returns throughout a substantial part of 1962. However, the industry is still "expansion prone" and probably cannot live long with prosperity. The haze surrounding the turkey outlook, according to Dr. Kohls, is practically impenetrable. Without an effective turkey order, a 1962 production at least equal to 1961 is possible, he said.

The place of the futures market in egg and poultry operations was explained by Carl Anderson of Merrill Lynch, Pierce, Fenner and Smith. He

JOB POINTERS — Vince Bergman, left, manager, salesman training, Ralston Purina Co., St. Louis, and Rudy Klausmeier, Indiana Farm Bureau Cooperative Assn., Inc., Indianapolis, are pictured discussing a chart which Mr. Bergman used in presenting his talk on putting more into a job than you take out of it. He spoke to the annual meeting of the Indiana State Poultry Assn., Inc.

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stated that hedging is good business practice but that the use of futures does not relieve the producer of the job of deciding what is ahead for his product.

Howard Zindel, head of the poultry department, Michigan State University, East Lansing, discussed poultry housing. He emphasized the necessity for good insulation in today's houses with their concentrated populations. "Use at least three inches of batt-type insulation in the ceiling and two inches in the side walls," Mr. Zindel recommends, "and be sure to install a full covering of a vapor barrier." He felt the maintenance of a minimum temperature of 45° and a maximum of 85° in laying houses was essential.

Dr. Wilhelm reported on the minimal environmental control studies with broilers conducted by Quaker Oats. It showed that in locations in the South, lack of a reflective roof with a paper barrier, revolving roof ventilators, hose sprinkler on roof, fans, removable windows, side drops and circulating hot water heat resulted in extra costs totaling $1,325 in five broods of a 10,000 capacity broiler house. The extra costs came from higher mortality, poorer feed conversion, extra medicinal costs and higher condemnation rates.

In a discussion of the use of lights with poultry, Dr. Jack Long, Purdue, stated that experimental results on some of the newer applications of lighting are not clear cut but that there is good evidence to indicate that restriction of light during the growing period will slow maturity and result in better production during the laying period. An increasing amount of light during the laying periods seems to give some additional stimulation to production.

Dr. A. A. Kraft, Iowa State University, Ames, speaking of the causes of spoilage in eggs and the factors influencing shelf life of poultry, stated that, while eggs furnish excellent nutrition for humans, they are also fine sources of nutrients for bacteria. He pointed out that the extent of egg shell porosity is an individual hen characteristic and that the amount of infection reaching the inside of an egg is directly proportionate to the degree of porosity. He also stated that egg albumen has several natural agents that give effective protection against spoilage, but poultry meat has no such protection. Strict sanitation throughout the processing plant is essential for a low bacterial count on poultry.

FEED FIRM EXPANDS

WOODBURN, ORE. — Woodburn Feed & Supply, Inc., here, has started a $30,000 improvement program. A conveyor system is to be installed to handle bulk deliveries by rail, and a new warehouse will be erected.

George W. Lee, Boston Executive, Dies

BOSTON—George W. Lee, 69, vice president of Edward R. Bacon Grain Co., and director of Bacon Bros., Inc., Leominster, Mass., died unexpectedly at his Boston home Nov. 2.

Mr. Lee was well known in domestic and export grain and feed circles. He was associated with the Bacon family in the grain business in Portland, Boston and Chicago almost 50 years. Mr. Lee graduated from Phillips Exeter in 1912 and from Hobart College in 1916. Survivors are his wife, a son, a daughter, and three grandchildren.

Funeral was Nov. 4 at the Church of the Advent, Boston. Honorary pallbearers included Carl J. B. Currie, Francis C. Bowes, Robert Gubbins, Charles J. Koelsch, Robert C. Bacon and Robert C. Bacon, Jr.

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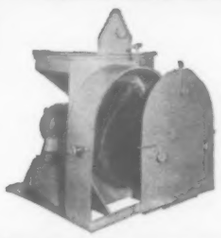

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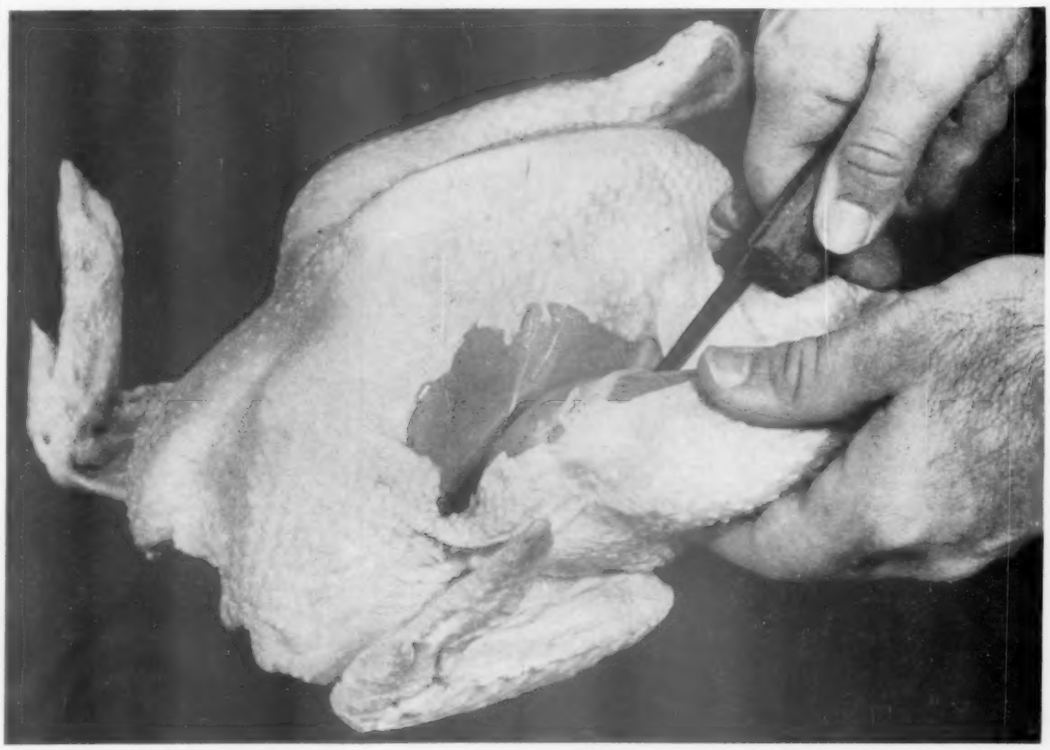

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U.S. FOOD FAIR—Dr. Paul Nevermann, mayor of Hamburg, Germany, left, looks at a model of the U.S. Food Fair 1961, while Wilbert Schaal, right, fair director, discusses the major features and plans for the show, to be in Hamburg Nov. 10-19. For about one mark (25¢), fair visitors will be able to buy a generous portion of American chicken or turkey especially prepared within the exhibit.

Group Gives Views On Grain Standards

WASHINGTON—Expressing their views on grain standards at a recent meeting here were members of the national committee on uniform grades of the Grain & Feed Dealers National Assn. They met with representatives of the U.S. Department of Agriculture Agricultural Marketing Service Grain Division and other department officials.

GFDNA said that the USDA spokesmen indicated that a broad, objective, long-range study is being made on grain standards. It was pointed out that some immediate changes have been proposed for grain sorghum, but USDA spokesmen assured the trade representatives that all other proposals would be considered as part of a long-range study.

Members of the GFDNA committee attending included: Milton L. Morrison, Morrison Grain Co., Inc., Salina, Kansas; Dean Daniels, McMaster Grain Co., Sioux City, Iowa; R. H. Jordan, Public Grain Elevator, New Orleans; Lloyd Case, Burdick Grain Co., Minneapolis; Alvin E. Oliver, executive vice president, Grain & Feed Dealers National Assn., Washington; D. E. White, Quaker Oats Co., St. Joseph, Mo.; J. L. Young, Checkerboard Grain Co., Kansas City; Ralph Brown (chairman), Louis Dreyfus Corp., Chicago; John C. Cowan, Dannen Mills, Inc., Kansas City, and Herbert L. Sharp, secretary-treasurer, GFDNA, Washington.

Also: David O. Milligan, E. A. Milligan & Sons, Inc., Des Moines; R. O. Westley, Central Soya, Ft. Wayne, Ind.; Donald Bidgood, Continental Grain Co., St. Louis; F. W. Higginbotham, Goodpasture Grain & Milling Co., Lubbock, Texas; George Wilkens, executive vice president, Minneapolis Grain Exchange; Ben Ferguson, Brackett Grain Co., Ft. Worth; Joe Bailey, Cargill, Inc., Minneapolis, and Dr. Carroll Brunthaver, director of research, GFDNA, Washington.

Form Tennessee Egg Producers Assn.

NASHVILLE, TENN.—The Tennessee Egg Producers Assn. was formed during the 9th annual convention of the Tennessee Poultry Federation in Nashville. The association will restrict membership to persons engaged in the production of eggs.

E. J. Bilbro, Mt. Juliet, was elected president; T. B. Hawkins, Shelbyville, vice president, and Dr. O. E. Goff, of the poultry department, University of Tennessee, was named secretary-treasurer.

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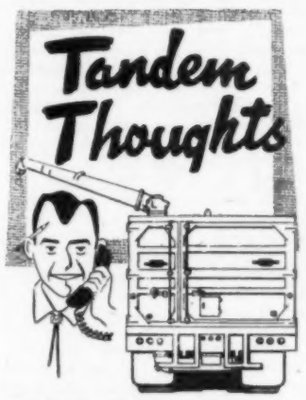

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USDA Issues Recommendations For Halting Salmonella Spread

MINNEAPOLIS — Four general recommendations aimed at halting spread of Salmonella disease organisms among poultry and livestock by interstate movement of animal byproducts were made this week by a special U.S. Department of Agriculture task force.

Details of the task force's first report were made public by Dr. E. E. Wedman, animal disease eradication official of USDA's Agricultural Research Service, at the annual meeting of the U.S. Livestock Sanitary Assn. in Minneapolis.

The recommendations are:

1. Development of sanitary procedures by which animal and poultry byproduct processors and allied industrial users can improve handling practices to insure products free of contamination.

2. Systematic sampling of animal byproducts and such mixtures as feeds and fertilizers containing animal byproducts for the presence of disease organisms.

3. Education of processors and allied users on both contamination and recontamination.

4. Additional research, including (a) surveys to determine the extent of disease caused by pathogens in animal rations and (b) development of uniformity in pathogen sampling and isolation techniques.

Salmonella is a group of related disease organisms that cause pullorum disease, fowl typhoid, paratyphoid, and other diseases in poultry and livestock.

The task force, directed by Dr. Francis J. Mulhern, director of the ARS animal disease eradication division, found a degree of contamination in animal and poultry byproducts that calls for "national concern but not alarm." Evidence of contamination was found in eggs, poultry, meat scraps, bone meal, and certain types of dog foods.

The evidence was gathered in seven regional study areas of the U.S., and task force members indicate that further study is necessary before final conclusions can be reached. Neither the full extent of contamination nor its economic importance has yet been established.

Recontamination

Recontamination following processing seems to be one means by which disease organisms are getting into animal byproducts, the task force reported. This occurs after the products have been sterilized but are still being handled. Animals themselves—animals brought to processing establishments for rendering, and rodents, insects and birds in the vicinity of plants—seem to be the chief source of recontamination organisms.

During the first phase of the study, begun a year ago, more than 1,100 contacts were made by task force members. The study was undertaken following reports by avian pathologists of pathogens in both poultry and poultry feeds.

Build Rice Hull Plant

STUTTGART, ARK. — A $100,000 plant to process and bag rice hulls for use as poultry litter in broiler and layer houses has been constructed in Stuttgart by the J. B. Hunt Co., Little Rock and Stuttgart.

Located on a 10-acre tract off Highway 79 a short distance from the city limits, the plant has 8,400 sq. ft. of floor space.

Cost, previously a drawback in use of rice hulls for litter, will be lower delivered to Arkansas poultrymen than for some other litter, a company spokesman said.

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FOR SALE—ONE ALFALFA DEHYDRATING plant, complete. Located in west central Ohio. Good field machinery and trucks. One Hetl dryer and feeder. 1,500 ton storage capacity. Contact Charles Nelson, West Liberty, Ohio.

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Wishes contact with U.S. firm—view provision extra capital or alternatively outright sale.

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MISCELLANEOUS

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CHAMPION MOBILE GRINDER AND mixer mills. Champion Portable Mill Co., 2105 Como Ave. S.E., Minneapolis 14, Minn.

FOR SALE—ENCLOSED MOTORS; RICH- ardson scale; truck scales; hammermills; oat crimpers; horizontal and upright feed mixers; sewing machines; elevator legs; screw conveyors; molasses mixers and pellet mills. J. E. Hagan Mill Machinery, Box 574, Jefferson City, Mo.

NEW S. HOWES, JR. B CORN CRACKER and grader complete; one used Jr. B corn cracker and grader; one (used) Jay Bee hammermill, Model 3UX; one Singer bag repair sewing machine, mounted on table; 20 used Draver feeders, various sizes. Penn Bangor, Inc., 25 North Main St., Bangor, Pa.

MODERATE SIZE DOG FOOD CANNING outfit—consists of 10 H.P. boiler with oil burner, two 10 ft. by 3 ft. horisontal retorts with roll-in wagons, M & S 4-pocket filler, large meat grinder, rotary pump, two cooking mixers with motors, Burt labeler, other miscellaneous. Price for all $3,500. Eastern Stock Food Co., 38 Steuben St., Brooklyn 5, N. Y.

CALIFORNIA PELLET MILLS FOR SALE: One unused California pellet mill, model 200C, with a single reduction drive to provide 265 r.p.m. die speed if driven with a 125 h.p., 1,800 r.p.m. drive motor. Unit is on a base, with Falk coupling, special Epoxy coated pellet chamber, stainless steel liner on gear box, stainless steel knife posts, stainless steel California Whirley feeder, and chrome plated stationary cone. No motor. Price, f.o.b. our yard Los Angeles, Cal., $8,250. Two California pellet mills, as described above, except that they are used, and are each equipped with a 125 h.p., G.E. 1,770 r.p.m., 2,300 volt, 3-phase, 60-cycle, frame 1343 motor. Price, f.o.b. our yard, Los Angeles, Cal., $9,000 each. The above equipment was purchased new in 1960. O'Brien Machinery, Inc., 2426 E. Washington Blvd., Los Angeles 21, Cal.

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All of the above machines have been replaced with new Bryant Double-Duty Hammermills. Some of the above have been rebuilt; others are priced as is.

Several used corn shellers of various makes and models.

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Columbus 12, Ohio Phone: 486-6555

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FOR SALE—ONE DAFFIN FEED MILL (1957), used little, $9,000. Financing available. Garland Bernhardt, R. 3, Tomah, Wis.

WHIRLAWAY AIRBLAST CAR LOADERS, flour, feed and grain machinery. One of the oldest and largest experienced equipment houses. J. E. Hagan Mill Machinery, Box 574, Jefferson City, Mo.

MOBILE MILLS, NEW, USED AND FAC- tory rebuilts. Complete with grinder, mixer, diesel, molasses. Financing available. Iowa Portable Mill Co., Oelwein, Iowa.

PNEUMATIC "AIR-LIFT" CONVEYORS— Package Units or "Bid-It-Yr-Self" kits. Capacity 1 to 100 ton/hr. up to 1,000 ft. Conveys free flowing material wet or dry. Nolder Co., Box 14, Corona Del Mar, Cal.

SEWING MACHINES—ALL TYPES CON- veyors, swinging units, portables. New and used. Fischbein, Union Special. Minneapolis. Complete rebuilding and service. McCullough & Co., 8205 Paradise Lane, Kansas City 34, Mo.; SOuth 1-2857.

FOR SALE—15 H.P. 100 LB. PRESSURE, BTU 700,000 vertical tubular boiler (Lattner) with oil burner. Insurance inspector will give "new" rating. Price $1,250, f.o.b. plant. Teske Milling Co., P.O. Box 416, Davenport, Iowa.

SITUATIONS WANTED

FEED YARD - RANCH MANAGER — 15 years' experience large ranching, feedlot, grain storage, mill operations. 34, B.S. in agriculture. D. T. Putnam, 1131 Pearce, Wichita, Kansas.

FIELD REPRESENTATIVE FOR SALES, service to North Carolina farmers, experienced in poultry, livestock feeding and management. Successful sales record. Married, age 35, college, 11 years' total experience. Six years with major feed company. Address Ad No. 7376, Feedstuffs, Minneapolis 40, Minn.

PRODUCTION MANAGER AVAILABLE — Graduate engineer with 15 years' experience in engineering, maintenance, feed plant management and direction of multi-plant operations. Commendable results in low cost efficiency improvements of older mills. Age 35. Desire challenging position as manager of large feed mill, operating responsibility for multi-plant operations or sales assignment with well regarded milling and material handling machinery organization. Please address Ad No. 7398, Feedstuffs, Minneapolis 40, Minn.

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WANTED — SCREW CONVEYOR, STEEL boxes, covers, beamings and hangers, etc. Selma Soybean Corp., Selma, N. C.

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WANTED TO BUY—50 TO 100 H.P. USED California and Sprout-Waldron pellet mills. Address Ad No. 7352, Feedstuffs, Minneapolis 40, Minn.

WANTED TO BUY — RICHARDSON scales, bag closing machines, other good flour, feed and grain machinery. Complete plants bought and sold. Appraisals. J. E. Hagan Mill Machinery, Box 574, Jefferson City, Mo.

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FEEDSTUFFS

Names in the News

WILLIAM C. ROLLINS JOINS BUCKEYE INCUBATOR CO.—William C. Rollins has joined the sales staff of Buckeye Incubator Co., Springfield, Ohio. His territory will include southern California, Baja, California and portions of Arizona and Nevada. Mr. Rollins has been a territory salesman for the Ralston Purina Co. and, later, branch manager of the Hilco feed division, Balfour, Guthrie & Co.

William C. Rollins

DR. EDGAR N. PETZOLD JOINS DR. SALSBURY'S — Dr. Edgar N. Petzold has joined Dr. Salsbury's Laboratories, Charles City, Iowa, as manager of the bio-chemistry department.

Dr. Edgar N. Petzold

Dr. Petzold is a graduate of Michigan State University with a bachelor's degree in chemistry, and he holds master's and doctor's degrees from Purdue University. Before joining Dr. Salsbury's, he was employed in the research division of Grain Processing Corp., Muscatine, Iowa.

WILLIAM E. HUNTER NAMED FIELD ENGINEER FOR TRIUMPH CORN SHELLERS—William E. Hunter has been appointed field engineer of the Triumph division of Bartlett-Snow-Pacific, Inc., Cleveland, Ohio. Mr. Hunter will work with Triumph distributors and their sales outlets.

William E. Hunter

Mr. Hunter has been active the past seven years in various phases of grain drying, corn shelling, elevator and machinery design and operation and management.

NOPCO ANNOUNCES TWO APPOINTMENTS — Nopco Chemical Co., Newark, N.J., has announced the appointment of a field sales manager and a sales representative.

Louis J. Dye has been named a field sales manager of the entire southern region, and Ollen C. Rhodes has been named a sales representative in three southern states, according to R. T. Whelan, sales manager, agricultural department.

Louis J. Dye

Ollen C. Rhodes

Mr. Dye will have supervision of sales representatives of the agricultural department in the southern states from Virginia and the Carolinas to Texas and Oklahoma. He will continue to make his headquarters at Charlotte, N.C. Prior to this appointment, he was southeastern district sales manager for the agricultural department.

Mr. Rhodes will be responsible for sales and service of such products as feed supplements and growth stimulants for livestock, swine and poultry feeds in Georgia, Alabama and Florida. Since graduation from the University of Georgia he operated a poultry and dairy farm several years, was a feed salesman eight years, later joined the sales staff of a company in which he specialized in hatchery sanitation, for two years was a partner in a poultry consulting firm, and then was a nutritionist with a milling company.

COLONIAL FARM APPOINTS DAVID CRAWFORD REPRESENTATIVE—David M. Crawford, Benton, Ark., has been appointed production service representative for Colonial Poultry Farms, Inc., Pleasant Hill, Mo., according to M. R. Irwin, president.

David M. Crawford

Mr. Crawford has been in the hatchery and feed business in Benton, Ark., since 1946, a business which included a 17,000-bird commercial egg farm.

RICHARD HOAGLAND NAMED CHECKERBOARD CO. MANAGER—Richard H. Hoagland, formerly assistant manager of the Checkerboard Grain Co., Chicago, has been named manager and has assumed his new duties, according to Eldred A. Cayce, Ralston Purina Co. executive vice president. Mr. Hoagland replaced William E. Casselman, who has resigned. Mr. Hoagland joined the Ralston Purina Co. at its headquarters in St. Louis Feb. 1, 1959, as manager of soybean oil sales. He transferred to the Checkerboard Grain Co. as assistant manager April 1, 1960.

Richard H. Hoagland

Prior to joining the Ralston Purina Co., Mr. Hoagland had been in the grain and soybean business, most recently as acting manager of the Sioux Soya Co., Sioux City, Iowa.

VICTOR CHEMICAL WORKS NAMES SANKO—George E. Sanko has been promoted to product manager, stock feed sales, Victor Chemical Works, division of Stauffer Chemical Co., to be headquartered in Victor's Chicago offices. He had been a district sales manager with the A. R. Maas division in Oakland, Cal.

Mr. Sanko, who joined the company in 1951, is a chemistry graduate of the University of Pennsylvania, where he holds bachelor's and master's degrees.

HENRY E. MEYLAN NAMED SPENCER KELLOGG CONTROLLER—The Spencer Kellogg division of Textron, Inc., Buffalo, N.Y., has announced the appointment of Henry E. Meylan as controller. Mr. Meylan, Hamburg, N.Y., succeeds Harold R. Heard, who has resigned.

Presently manager of systems and procedures, Mr. Meylan has been associated with various sections of the Spencer Kellogg accounting department.

WINNIPEG GRAIN EXCHANGE PRESIDENT RETIRES—Stanley N. Jones, who has been associated with the grain trade almost 50 years, has announced his retirement as president of the Winnipeg Grain Exchange, a post he has held 15 years. Mr. Jones was elected vice president of the exchange in 1944 and president in 1946. He will resume active direction of his brokerage business.

SECO ANNOUNCES TWO APPOINTMENTS—SECO, Inc., Goodlettsville, Tenn., has appointed a sales engineer and a mobile milling equipment salesman, it was announced by Paul J. Zimmerman, executive vice president.

Ralph C. Chappell, Nashville, Tenn., has been appointed sales engineer for the industrial division.

Wendell H. Towner

Ralph C. Chappell

Mr. Chappell will specialize in the sales and installation of SECO stationary feed processing and materials handling equipment. Before joining SECO, he was associated with Dozier Equipment Co., Nashville, and, prior to this, was with Farnsworth and Chambers Co., Inc., Houston, Texas, as an engineer and office manager.

Wendell H. Towner, Des Moines, Iowa, has been appointed mobile feed milling equipment salesman for north central Iowa. Mr. Towner will specialize in the sale of SECO pushbutton mobile feed mills. He was previously a sales representative for Melos Manufacturing Co., Des Moines.

DISEASE-RESISTANT ALFALFA

WASHINGTON—Uinta, a disease-resistant alfalfa for the intermountain region of the western U.S., has been developed, it was announced by the U.S. Department of Agriculture and the Utah Agricultural Experiment Station.

Some certified seed is expected to be available for planting in 1963. None is available from USDA. Uinta (pronounced you-IN-tuh) is more resistant to yellow leaf blotch and downy mildew than Ranger, the alfalfa variety most extensively grown in the U.S., it was reported.

Iowans Preparing For Turkey Hearing

DES MOINES—Iowans are fortifying themselves with information in preparation for the hearing to be conducted here at the State House Nov. 24, 25 and 27 on proposed turkey and turkey hatching egg marketing orders.

For one thing, turkeymen have been invited to participate in a series of pre-hearing discussion meetings organized and sponsored by the Supersweet Feeds division of International Milling Co., Minneapolis.

Also, the Iowa agricultural extension service will conduct a series of five meetings at which the marketing order proposals are to be explained.

Iowa is represented by four members on the National Turkey Advisory Committee, appointed to study and recommend marketing order proposals.

Robert Perrin, Chariton, Iowa, turkey grower and president of the Iowa Turkey Federation, indicated that his group would not take an official stand on the proposed marketing orders but "would like to see some aspects of the orders altered." He said the Iowa federation plans to prepare testimony for the Des Moines hearing.

Iowa Turkey Growers Put Birds in Storage

DES MOINES—A number of members of the Iowa Turkey Federation have joined the nation-wide trend of putting their birds into cold storage rather than selling them at the current low prices.

That is the word from John F. Planalp, executive secretary of the Iowa Turkey Federation. Mr. Planalp said cold storage holding has been used by processing plants but stated that this is the first time that a number of growers have turned to this form of holding.

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Poultrymen Told to Educate, Promote

UNIVERSITY PARK, N.M.—New Mexico and Texas poultrymen took a close look at their production and marketing programs at a state poultry meeting held on the New Mexico State University campus.

Sponsored by the extension service and poultry department of the university, the program featured talks by poultry scientists, egg retailers, marketing experts and insect and disease control officials.

A University of Arizona poultry specialist told the group that the prosperity of their industry is tied to the per capita consumption of eggs and poultry, and consumption of eggs per person has been dropping since 1950. The reason for this steady decline, according to Dr. Frank Rollins, is that "we have been mainly a product-oriented and not a customer-oriented industry. We have treated marketing as a stepchild, something that must be done once the vital job of producing eggs is completed. In other words, we have neglected to consider the consumer's wants. As a result, many of our customers are choosing competitive substitutes for our products."

Educate, Promote

He stressed the necessity of an energetic educational and promotional program to motivate consumers to buy more eggs and poultry products. "We need brand identity, and the consumer must be familiar with these brands," the poultry specialist said. "Our advertising must be seen—it needs to have appeal and the consumer must be able to easily recall it. And our prices must be based upon cost as well as on psychological factors."

Bert Jones, co-owner of the H & J Food Baskets at Artesia, Tularosa, and Las Cruces, also emphasized the necessity of a good educational and promotional program. He advised poultrymen to establish regular outlets and keep them supplied. "If you have a surplus of eggs in certain seasons, help your retailer handle them by offering 'special buys,' which he in turn can pass on to the consumer," Mr. Jones said.

Dr. D. W. Francis, head of the NMSU poultry science department, reviewed the work of the experiment station's diagnostic laboratory and pointed out how the laboratory could assist poultrymen with their disease problems. "The number one problem," Dr. Francis said, "is to know what you are fighting. Experienced flock owners may guess accurately 50% of the time, but the diagnostician is accurate 90-95% of the time."

Dr. L. O. Sanchez, entomologist with the New Mexico State University experiment station, said external parasites cost New Mexico poultrymen $290,500 in 1960.

"Compare this with the gross cash results from the sale of eggs and farm chickens in 1960 which totaled $4,150,000, and you can readily see how expensive these parasites are," the entomologist stated. "Much of this loss could have been prevented by a diligent parasite control program."

IMC Reports Earnings

NEW YORK—International Minerals & Chemical Corp. is expected to register its fourth successive year of increased earnings in fiscal 1961-62, shareholders were told at the annual meeting.

T. M. Ware, president, reporting first quarter earnings of 27¢ per share on 2,629,416 common shares outstanding, compared with a loss of 28¢ on 2,467,846 common shares in the same period last year, said 1961-62 should follow "the consistent trend which has brought us from earnings per share of $2.09 in 1958 to $3.07 in 1961."

Sales in the first quarter were $27.5 million, up 15% over the corresponding quarter the previous year, and Mr. Ware said 1961-62 sales should increase by as much as 15%.

AT FIRST POULTRY DAY—Among the 50 poultrymen and others attending the first Poultry Day at New Mexico State University were, left to right, Manuel Zubialde, Stahmann Farms; Roy V. Torres; Dr. D. W. Francis, head of the NMSU poultry department; Charlie Wigham, New Mexico Department of Agriculture, and Marvin Williams, Arizona State Hatchery, Tucson. They are shown inspecting culture specimens in the pathology laboratory.

ESSAY CONTEST WINNERS—Agricultural students of eight state land-grant colleges and universities who won state essay contests and placed in a regional contest sponsored by the Midwest Feed Manufacturers Assn. in conjunction with the Centennial Nutrition Conference held at Kansas City Oct. 23-25 are congratulated by the director of the contests, Dr. Rollin H. Thayer (left, first row), Oklahoma State University poultry science department. The students are, from left: First row: W. H. Harrison, Jr., Texas winner and grand prize regional winner; Cora Mae Briggs, Nebraska winner, and Katherine Pedley, Arkansas winner; second row—George White, Iowa winner; W. Timothy Guse, Missouri winner; David E. Birkle, Colorado winner; Howard L. Avery, Oklahoma winner and third place regional winner, and L. Lugene Houston, Kansas winner and second place regional winner.

Texan Wins Grand Prize in Essay Contest

KANSAS CITY—W. H. Harrison, Jr., agricultural economics senior at Texas A&M College, was announced as first place and grand prize winner in a regional agricultural essay contest during the Centennial Nutrition Conference here Oct. 23-25.

Runner-up honors in the contest, sponsored by the Midwest Feed Manufacturers Assn. to create interest in the centennial anniversary of the nation's land-grant colleges and universities and in agricultural careers, were awarded to L. Lugene Houston, Kansas State University cereal chemistry senior. Howard L. Avery, poultry science senior at Oklahoma State University, placed third.

The first, second and third place winners and five other students advanced to regional competition by winning their respective state contests. Each of the state winners was awarded $50 and an expense-paid trip to the Centennial Nutrition Conference. State contests were conducted in the eight states served by the Midwest Feed Manufacturers Assn.

In addition to the state level prizes, the first, second and third place regional contest winners received awards of $300, $200 and $100, respectively.

All essays concerned modern agriculture and why the writer had chosen a career related to it.

State contest winners other than the three who placed in the regional contest were: Katherine Pedley, dietetics senior, University of Arkansas; David E. Birkle, soil science senior, Colorado State University; George White, agricultural journalism senior, Iowa State University; W. Timothy Guse, agricultural journalism, University of Missouri; and Cora Mae Briggs, home economics senior, University of Nebraska.

The contest was directed by Dr. Rollin H. Thayer, professor in the department of poultry science at Oklahoma State University and chairman of the association's careers in agriculture committee.

Increased Poultry Integration Foreseen

NASHVILLE, TENN.—More integration in the poultry industry was foreseen by Dr. John A. Ewing, director of the University of Tennessee agricultural experiment station, in a talk to the Tennessee Poultry and Egg Assn. during its annual meeting.

"One firm either will own, supervise, direct or coordinate the manufacture of feed, commercial broilers and layers, hatchery supply flocks and concentration on products and processing, and marketing of eggs and poultry meat," Dr. Ewing said.

This does not mean that one company will own the entire enterprise, though in some cases this will be true, as it is now, he pointed out. "It does mean that every unit will dove-tail together for greater efficiency."

WEST VIRGINIA CONVENTION—The photos above were taken at the West Virginia Feed Dealers Assn. annual convention in Davis. In the first picture are members of a panel which discussed the topic "What's the Secret," which included pointers on success in the feed business. Left to right are John Lough, area development director of Hope Gas Co., Morgantown, W.Va., panel chairman; J. S. Larrick, Beckley Ice & Feed, Beckley; Delbert Stalnaker, Foster Feed Co., Weston, and Charles Halterman, Shawnee Milling Co., Petersburg. In the second picture, during the social hour, are, left to right, E. H. Nelson, John W. Eshelman & Sons, newly elected president; Carl Hawkins, Hawkins Feed Store, Fairmont; E. L. Fitch, Bobb Bros., Leesburg, Ohio, and Russ Thomas, Preston Feed Corp., Manheim.

SITUATIONS

(Continued from page 1)

be planning. Also, of course, is the possible effect of marketing orders.

Egg Outlook

Let's see what USDA says about the 1962 outlook for eggs.

First of all, egg production in 1962 is expected to exceed the 170 million cases that are in prospect for 1961. And prices to producers are likely to average below 1961. Lower egg prices than the year before appear especially likely for the first quarter of 1962 in contrast to the first quarter of 1961, when prices were contra-seasonally high.

Data in USDA's files indicate that hatchings of egg-type chicks will be larger than year before through February and perhaps they'll be about the same as in 1961 in March through June. If this is really what happens, the number of replacement birds raised in 1962 is likely to be 5-8% larger than this year's 346 million.

(The feed industry survey committee of the American Feed Manufacturers Assn. expects the number of chickens raised for laying flock replacements to be 3% greater in 1962 than in 1961.)

Because the size of the laying flock for the first half of 1962 is already largely fixed by the number of birds presently available, USDA believes it is practically assured that the monthly egg supply through August will be larger than in the corresponding months a year earlier. The decline of less than 1% from the year before, as of Oct. 1, 1961, in the number of potential layers will be more than offset by an extension of past trends toward higher rates of lay.

After mid-1962, egg production is expected to increasingly reflect the size of the hatch of egg-type chicks from October, 1961, through the important hatching months of April and May.

Reasons for Expansion

Bases for the expectation of larger total hatch are: (1) Current hatching activity, which is considerably above last year, (2) low broiler prices, which encourage shifts to egg production, and (3) the likelihood that late-spring egg prices, which influence hatchings at the tail end of the season, will be about up to 1961.

Increases in egg-type chick hatchings indicate a widespread interest in raising more layers. And they represent more than a geographic shift of the industry to climates where winter rearing is easier, according to USDA.

"Linked to this shift—since the broiler belt is in the South—is the disappointment with recent broiler prices and the opportunity to shift from broilers to hens in the use both of feed facilities and of housing," USDA observes. The egg-type chick hatching expansion also represents an awareness on the part of commercial flock owners that using laying houses to capacity, by brooding the year around if necessary, is generally of advantage to the individual.

USDA notes that late summer or early fall appears to be a practical season for the commercial operator to raise chicks. Chicks hatched at this time of year will produce their small and medium eggs in the spring when there is little discount against them, and then will be laying large eggs in late summer when the premium for them is most favorable.

To the extent that they are shifting to this season, the August-November hatchery operations represent a shift from February-April, rather than a gain in 12-month output, USDA notes.

Regardless of the level of hatchery output from now until about March, the subsequent monthly hatchings of chicks are not likely to repeat the 1961 pattern, when May-June hatchings dropped off sharply compared with the year before.

Egg prices in early 1962 are expected to be lower than a year earlier, following the pattern that is likely for late 1961 and largely reflecting increasing supplies.

In the absence of weather extremes, USDA expects a downward movement of egg prices to continue through the rest of this year and on into the beginning of 1962. January, 1962, egg prices may be 5¢ doz. under the 36.6¢ price of a year earlier.

USDA also says that even though the lowest 1962 mid-month price may not be substantially lower than the 30.9¢ of June, 1961, most prices during the first four months of 1962 are likely to be below comparable 1961 figures. If the hatch develops as expected, the egg industry can look for prices in the second half of 1962 to average no higher and possibly lower than 1961's comparable prices.

Broiler Outlook

In the broiler outlook, USDA sees insufficient tightening of supplies to indicate any imminent return of prices to pre-May levels of about 15¢ lb. (U.S. average).

"Despite the weakened financial position of firms backing broiler production, the same forces which encouraged output in 1961 will be evident in 1962," USDA observes. "Unless limited by effective industry-wide programs, which would require new legislation, total 1962 output probably will be close to 1961's." (AFMA's feed survey committee expects commercial broiler production for the calendar year of 1962 to increase 1% to a total of 2 billion.)

Turkey Situation

Despite the price troubles brought by a 26% expansion in turkey production this year over last year, a decrease of 6% from last year in the number of poults hatched in September and a 26% cut in the number of eggs in incubators Oct. 1, the 1962 turkey crop is expected to be another big one. Final determination will be affected, of course, by what happens to proposed marketing orders. (The AFMA feed survey committee predicts a 1962 turkey crop of 102 million—a 5% drop from 1961.)

Evidence pointing toward a large 1962 crop is a 15-state report which shows that producers holding turkey breeder hens on Oct. 1 intend to reduce those flocks by only about 3%. This would be only a small reduction from the breeder flock which resulted in 107 million turkeys raised in 1961.

SPECIALIZATION

(Continued from page 1)

grain farmers are buying and finishing feeder pigs produced by other farmers.

The feeder pig discussion was one of several subjects of interest to the feed industry at the 4th such swine industry conference, held Nov. 9-10. It was sponsored by several organizations, among them the American Feed Manufacturers Assn.

Mr. McKean said the trend in pig production is resulting from the desire of the grain farmer to increase the size of his farming operation in two ways: By farming more land and raising more grain, and by feeding this grain to livestock.

The grain farmer's goals, Mr. McKean said, are minimum labor input per unit and maximum efficiency, with a large turnover of animal units per year. "He is not interested in using pasture units to carry a sow herd because his land is better suited to a grain program than it is to a pasture program, and, with increased land taxes and land prices, it is economically unsound for him not to utilize the land to the greatest advantage.

"He is farming more acres with a minimum of labor and does not want to maintain a sow herd which requires a high labor input. Also, in feeding pigs from 40 lb. to market, provided he has a good source of supply, a feeder encounters less disease problems and less disease buildup on his farm."

Mr. McKean said this trend is expanding at the present as rapidly as feeders are able to find an adequate, responsible source of feeder pigs.

Facilities for feeding pigs in confinement represent a high investment and are economical, Mr. McKean told the workshop, only if they are (1) operated at full capacity, (2) require a minimum amount of labor per unit, (3) can be stocked with a high quality feeder pig, and (4) have a minimum amount of disease problems.

Therefore, he said, to meet this type of demand, the feeder pig industry is going to have to concentrate on producing a high quality, healthy feeder pig for this customer who is interested in health, gainability and quality in that order.

Efforts being made to improve the quality of feeder pigs in one area were outlined for the workshop by Norbert Brandt, director of procurement and production for the Wisconsin Feeder Pig Marketing Cooperative.

New Program

He discussed plans of the Swine Breeding Research Cooperative formed by the feeder pig organization he represents, along with Anchor Serum Co., Badger Breeders Cooperative, General Mills, Oscar Mayer Co. and the Production Credit Association of Green Bay, Wis. The breeder cooperative has three plans:

One plan is the selection, assembling and sale of boars and gilts with performance records and testing behind them. This breeding stock will be offered for sale to feeder pig producers in a building constructed by the organization at Francis Creek, Wis.

The second plan involves the purchase of breeding stock from breeders who have been in the habit of selling at 40 to 60 lb. Since the major problem here is that animals change in type and conformation after 40 to 60 lb., they will be purchased at that size by the organization, put on test and then evaluated at 200 lb. on the basis of rate of gain, backfat probes and type. Those that qualify will be offered for sale.

In the third part of the program, 40 breeders with about 50 sows each will be selected. The top sows in the herd will be bred to good boars of the same breed to continue the purebred line and the other sows will be bred to boars of other breeds to produce crossbred gilts. The best crossbred gilts will be selected on the basis of their performance along with test and carcass data on barrow brothers, for use in the herds of feeder pig producers.

Mr. Brandt said the third plan is being depended upon as the best long-range program for standardization of the feeder pig production of his organization. He added that one of the long-range goals is to have feeder pig producers buy all of their foundation breeding stock to increase uniformity of the feeder pigs.

Southern Developments

Charles L. Yeager of Yeager & Sullivan, Inc., feeder pig dealer of Camden, Ind., discussed the growth and development of the feeder pig industry in the southern U.S. He said the South has an unlimited market for feeder pigs at a fair price if it produces the quality the Corn Belt desires.

The South has a lot of natural resources that make it an ideal place to produce pigs, and in the past it has had a market for poor quality pigs, but this will not be true in the future, for good feeders are keeping cost records on their pigs, he said.

Emphasizing that in Indiana alone the feeder big business is a $12 million business annually, plus the business it involves for veterinarians, serum companies, marketing agencies and processors, Mr. Yeager declared that over the Midwest it is a billion dollar business. He said it is being taken too lightly and the swine industry should help in encouraging the feeder pig producer not to fail in the job of the future.

Disease

Dr. M. W. Lowe of the Anchor Serum Co., discussed problems and control of the major stress factors and disease affecting the feeder pig industry. He pointed out that inadequate nutrition can be a stress factor since the basic nutrients are necessary for disease resistance.

He listed exposure, fatigue and anxiety as environmental stress factors along with vaccination which itself imposes stresses on the pig. For the most part, he said, cholera vaccination must be done near a time of considerable stress and because of that he recommended plenty of anti-hog cholera serum, 50 to 100% more than minimum dosages to counteract a drop in the white blood cell count of the pig.

Dr. Lowe said virus pig pneumonia, one of the major problems of the feeder pig industry, may often be carried by a pig for some time even though it appears to be healthy. "This is a situation waiting to be triggered by environmental stress for accentuation of symptoms." To combat this problem, it should be emphasized to feeder pig producers that the resistance of the pig should be kept as high as possible. Bacterial infection should be kept subdued so that the pig may produce antibodies to fight the viral agents.

IOWA

(Continued from page 1)

tions for changes be inserted appropriately at hearings which will be held in Iowa."

Federation officials said they had suggested 22 different changes, all of a relatively minor nature and dealing with clarification and definition of certain mechanics involved in the marketing order proposals as contained in the Federal Register.

TOP OF THE HOPPER

(Continued from page 2)

and other party higher-ups very impatient with the Secretary. The Farm Bureau Federation and the U.S. Chamber of Commerce, among others, are hitting hard at the cost and relative ineffectiveness of the feed grain effort, and the administration, it might be surmised, does not relish the idea of having to explain its "big spending" tag in this area, particularly to urban voters.

v v

THE NATIONAL BROILER COUNCIL hit some sort of a promotion jackpot last week with the appearance of an article, "All America's Feasting on Broilers," in This Week magazine, a newspaper Sunday supplement having very large circulation in metropolitan papers. Written by Clementine Paddleford, the magazine's food editor, the article is full of plugs for the quality and economy of chicken such as this: "Delicious, plentiful and cheap—chicken is still the best buy at your butcher's this fall. Get in on the boom with three 'different' recipes." Miss Paddleford was among the food editors who toured the Georgia broiler area recently with guidance from the NBC staff.

The FEED MARKET

PRICE QUOTATIONS, MARKET TRENDS
OF PRINCIPAL INGREDIENTS

NOTE: Quotations on feed ingredients shown in these and adjoining columns are wholesale prices, per ton, bulk, for prompt delivery, unless otherwise noted. They are the latest quotations available from Feedstuffs correspondents and are not necessarily those in effect on date of publication. The prices represent fair average trading values and do not necessarily represent extreme low or high levels at which individual sales might have occurred. A descriptive summary of supply and demand factors prevalent in the feed market appears on page 2.

ALFALFA MEAL

Chicago: Demand strong; trend $2 higher; supply moderate; 17% protein, dehydrated, 100,000 units vitamin A $51.10.

Seattle: Demand fair; trend firm; supply ample; suncured 15% protein $40, Seattle; dehydrated 150,000 A units $67, Seattle, both unchanged.

Ft. Worth: Demand fair for dehydrated, slow for suncured; trend steady; supply sufficient; sacked; dehydrated 17% 100,000 A $55.50@56, rail or truck, November, up $1@1.50; suncured 13% ¼ in. grind, No. 1 $42, truck, unchanged.

Kansas City: Demand fair; trend steady to stronger; supply adequate; 17% dehydrated alfalfa, 100,000 A, pellets $45@48, reground pellets $47@49; 18% dehydrated alfalfa, 125,000 A, pellets $47@51, reground pellets $48@52; 20% dehydrated alfalfa, 150,000 A, pellets $52@58, reground pellets $54@59; unchanged to mostly $2 higher.

Los Angeles: Demand and trend steady; supply ample; dehydrated meal, 17% protein, 100,000 A $50@51; dehydrated pellet meal, 17% protein, 100,000 A $52@54; suncured meal, 15% protein $41@42; suncured crumbles, 15% protein, $43@44, all unchanged.

St. Louis: Demand good; trend steady; supply ample; dehydrated, 17% protein, 100,000 units of vitamin A, pellets, $48.50, unchanged.

Memphis: Demand fair; trend steady to higher; supply ample; dehydrated, 17% protein, guaranteed 100,000 units vitamin A $54, up $1; reground pellets, $53.60, up $2.

Boston: Demand good; trend firm; supply adequate; dehydrated 17% $59, up $1; suncured 13% $48, both sacked, unchanged.

Cincinnati: Demand fair; trend steady; supply adequate; 17% dehydrated, 100,000 vitamin A $50@54, unchanged.

Buffalo: Demand and supply fair; trend steady; $58.10 sacked, Boston, unchanged.

Portland: Demand moderate; trend unchanged; supply good; 15% suncured $37; 20% dehydrated pellet meal $65.50, sacked.

Minneapolis: Demand fair; supply adequate; 17% dehydrated 100,000 units vitamin A reground pellets $51, up $1; oiled reground $52, up $1.

Denver: Demand fair; trend steady; supply ample; $46.

ANIMAL FAT (STABILIZED)

Chicago: Demand quiet; trend 25¢ per cwt. off; supply ample; bleachable fancy tallow $5.50; yellow grease $5 cwt., tank truck or carlots.

Los Angeles: Demand good; supply ample; trend steady; 5½¢ lb., unchanged.

St. Louis: Demand good; trend easier; supply ample; yellow grease 4¾¢ lb., delivered, tank truck or cars, down ¼¢ lb.

Ft. Worth: Demand good; trend steady; supply sufficient; prime tallow, tank cars 5¼¢, drums 6¾@7⅛¢, f.o.b. north Texas packing plants with returnable drums, down ¼¢.

Memphis: Demand slow; trend steady; supply adequate; yellow grease 5¢; prime tallow 5⅛¢, both unchanged.

Boston: Demand, trend and supply steady; tallow 5⅜@5⅝¢ lb., yellow grease 5@5¼¢ lb., both unchanged.

Atlanta: Demand good; trend steady; supply limited; 5¼¢ lb., f.o.b. Alabama and Georgia production points, unchanged.

St. Paul: Demand good; supply ample; bleachable fancy off ⅛¢ to 5⅜¢ lb., f.o.b. producers' plant.

BARLEY FEED

Chicago: Demand fair; trend firm; supply ample; $33 sacked.

Baltimore: Demand fair; trend steady; supply ample; $43.50 sacked.

Seattle: Demand good; trend firm; supply fair; $49, truck lots, up 50¢.

Los Angeles: Demand fair; supply adequate; trend firm; $2.62½ cwt., unchanged.

Boston: Demand slow; trend easier; supply light; $44.50, off 50¢.

Denver: Demand fair; trend steady; supply short; $2.55 sacked, $2.30 bulk.

Portland: Demand and supply fair; trend unchanged; $49.

BLOOD MEAL

Chicago: Demand fair; trend firm; supply moderate; 80% protein $132.50 sacked.

Los Angeles: Demand slower; supply ample; trend weaker; $5@5.25 unit of ammonia, sacked, down 25¢.

BONE MEAL (STEAMED)

Chicago: Demand fair; trend steady; supply adequate; $97.50 sacked.

Seattle: Demand fair; trend steady; supply good; $92, f.o.b. car, Seattle, sacked, unchanged.

Boston: Demand, trend and supply steady; $105, unchanged.

Ft. Worth: Demand fair; trend steady; supply sufficient; sacked; domestic $100, f.o.b. Ft. Worth, unchanged.

Los Angeles: Demand fair; trend easier; supply adequate; imported $78, 20 ton lots, sacked, down 50¢.

Cincinnati: Demand fair; trend steady; supply ample; $100 sacked, Cincinnati, unchanged.

Denver: Demand good; trend steady; supply ample; $112.

Buffalo: Demand and trend steady; supply fair; $105 sacked, f.o.b. Buffalo, unchanged.

BREWERS DRIED GRAINS

Chicago: Demand improved; trend 50¢ to $1 higher; supply fair; 26% protein $38.

Los Angeles: Demand and trend steady; supply light; $51, unchanged.

Boston: Demand fair; trend easier; supply adequate; $46.50, down $1.50.

St. Louis: Demand good; trend firmer; supply scarce; 26% protein $42, up $1.

Ft. Worth: Demand slow; trend steady; supply sufficient; 26% protein $57.50 sacked, November, unchanged.

Cincinnati: Demand poor; trend steady; supply adequate; $49, down $1.

Buffalo: Demand and supply fair; trend steady; $48, Boston, unchanged.

BREWERS DRIED YEAST

Seattle: Demand slow; trend steady; supply ample; $12 cwt., sacked.

St. Louis: Demand fair; trend firm; supply ample; 9½@10¢ lb., carlots, sacked; 10½¢ lb., ton lots; 11½¢ lb., less than ton lots.

Chicago: Demand fair; trend steady; supply ample; 9½@10¢ lb., carlots, sacked; 9¾@12½¢ lb., l.c.l.

Los Angeles: Demand good; trend steady; supply adequate; 10¢ lb., 5 ton lots, sacked; 11¢ lb., 1 ton lots, sacked; 12¢ lb., less than ton lots, sacked; all unchanged.

Boston: Demand and supply steady; trend steady; 11¢ lb., unchanged.

Cincinnati: 9@10¢ lb., sacked, unchanged.

Buffalo: Demand and supply fair; trend higher; $9.25 cwt., f.o.b. Buffalo, up 10¢.

CALCIUM CARBONATE

Seattle: Demand and trend steady; supply good; $14, ex-warehouse, sacked.

Chicago: Demand fair; trend steady; supply ample; fine grind, plain, 100 lb. bags $9.54; bulk, in hopper cars $7.54; bulk in boxcars $8.05; granular grind $1 premium.

Minneapolis: Fine grind, 50 lb. bags $13.75; 100 lb. bags $13; bulk, boxcar $11.50; bulk, hopper $11; coarse grind $1 premium, delivered Minneapolis.

Los Angeles: Demand fair; trend steady; supply adequate; flour $9.85, 20 ton cars, sacked; meal $10.20, 20 ton cars, sacked; both unchanged.

Ft. Worth: Demand normal; trend steady; supply sufficient; $7.50, sacked, f.o.b. north Texas, unchanged.

Cincinnati: Demand fair; trend steady; supply adequate; $7@7.50 cwt., unchanged.

Denver: Demand fair; trend steady; supply ample; $12.50, car load.

COCONUT OIL MEAL

Seattle: Demand fair; trend steady; supply ample; solvent-type $71, f.o.b. car Seattle, sacked, unchanged.

Los Angeles: Demand slow; supply adequate; trend steady; copra cake $63@64, unchanged.

Portland: Demand good; supply tight; trend unchanged; 20% solvent $65.20.

CONDENSED FISH SOLUBLES

Los Angeles: Demand steady; trend firm; supply limited; 3½¢ lb., unchanged.

Boston: Demand active; trend firm; supply short; November through December delivery $55, unchanged.

Denver: Demand weak; trend steady; supply ample; 3¢ lb., f.o.b. West Coast.

CORN GLUTEN FEED AND MEAL

(All quotations for all cities are bulk basis, sacked basis $8 more)

Minneapolis: Feed $41.70, meal $70.70.
Atlanta: Feed $45.10, meal $74.10.
Birmingham: Feed $42.90, meal $71.90.
Boston: Feed $46.60, meal $75.60.
Chicago: Feed $35, meal $64.
Cleveland: Feed $43, meal $72.
Denver: Feed $45.30, meal $74.30.
Ft. Worth: Feed $45.80, meal $72.80.
Indianapolis: Feed $40.25, meal $69.25.
Kansas City: Feed $35, meal $64.
Louisville: Feed $41.55, meal $70.55.
New York: Feed $46.20, meal $75.20.
Norfolk: Feed $45.60, meal $74.60.
Philadelphia: Feed $45.80, meal $74.80.
St. Louis: Feed $35, meal $64.

CORN OIL MEAL

Seattle: Demand good; trend easy; supply ample; $50, car, down $2.

Cincinnati: Demand fair; trend steady; supply adequate; $42, unchanged.

COTTONSEED OIL MEAL

Seattle: Demand good; trend firm; supply ample; expeller 41% $70, f.o.b. car, Seattle, up $1.

Memphis: Demand fair; trend steady; supply ample; prime 41% protein, old process $59, up $2; new process, 41% protein, $57.50, up $2.

Los Angeles: Demand slow; trend steady; supply ample; $55, unchanged.

Ft. Worth: Demand good; trend firm; offerings light for nearby delivery; 41% old process $60@61, f.o.b. mills Ft. Worth, unchanged; loose hulls $15@16, unchanged; solvent with 2% fat added $62.60, unchanged; dry $61.60, unchanged.

Kansas City: Demand good; supply adequate; trend stronger; 41% solvent $65.20, up $2; 41% old process $65.70, up $1.50.

St. Louis: Demand good; trend firm; supply ample; 41% solvent process $58, Memphis basis, $1 higher.

Cincinnati: Demand fair; trend steady; supply adequate; $65.50, up 50¢.

Atlanta: Demand good; trend stronger; supply short; 41% $65, North Carolina, South Carolina and Georgia, up $2; $59 North Alabama, up $1; $58.50 Mississippi and Tennessee, up $1.50.

Denver: Demand fair; trend steady; supply ample; $65.

Buffalo: Demand fair to good; trend higher; supply fair to poor; $79.90 sacked, Boston; up $3.50.

Portland: Demand and supply good; trend up a little; 41% solvent $69.10.

CURACAO PHOSPHATE

New York: Minimum 14% phosphorus $13.50 sacked, $10.50 bulk, f.o.b. New Orleans, Jacksonville and Philadelphia.

DEFLUORINATED PHOSPHATE

Coronet, Fla.: Minimum phosphorus 18%, minimum calcium 31%, maximum calcium 34%, maximum fluorine .18%; guaranteed uniform analysis; carload $61.25, sacked, 100 lb. multiwall bags, bulk $58.25; truck load $62, sacked, in 100 lb. multiwall bags, bulk $59, f.o.b. Coronet, Fla.

Tupelo, Miss.: Minimum phosphorus 14%, minimum calcium 28%, maximum fluorine .14% $52, f.o.b. Tupelo in 100 lb. multiwall bags, $49 bulk.

Wales, Tenn.: Minimum phosphorus 18%, minimum calcium 33%, maximum 36%, maximum fluorine .18% $66 (or $3.67 per unit of P), f.o.b. Wales in 100 lb. multiwall bags, $3 less in bulk.

Butte, Mont.: Minimum phosphorus 18%, minimum calcium 32%, maximum calcium 36%, minimum fluorine .18% $61 (or $4.50 per unit of P), f.o.b. Butte, 100 lb. multiwall bags; bulk $78; truck lots of less than 10 tons $10 more, bagged or bulk.

Houston: Minimum phosphorus 19%, minimum calcium 32%, maximum calcium 35%, maximum fluorine .19% $69.35 net ton, f.o.b. Houston, 100 lb. multiwall bags; $66.35 bulk ($3.65 per unit of P).

Port Arthur, Texas: Minimum phosphorus 18%, minimum calcium 31%, maximum calcium 34%, maximum fluorine .18%; guaranteed uniform analysis; carload and truck load $65.75, sacked, 100 lb. multiwall bags; bulk $62.75, f.o.b. Port Arthur.

Ft. Worth: Demand good; trend steady; supply adequate; minimum 18% phosphorus, maximum 34% calcium, maximum .18% fluorine $73.45, sacked, unchanged.

Cincinnati: 18% phosphorus, carlots $74.30, ton lots $84.30; 14% phosphorus, carlots $62.50, ton lots $72.50, Cincinnati, unchanged.

DICALCIUM PHOSPHATE

Chicago: Bulk, carlots and truck loads, 18½% phosphate $78 and 21% phosphate $89; packed in 100 lb. papers, 10 tons or more, 18½% phosphate $81 and 21% $92; lesser quantities, 18½% phosphate $91 and 21% $102; above prices per ton, f.o.b. Chicago Heights, Ill., or Nashville, Tenn.

Bonnie, Fla.: Minimum phosphorus 18½%, granular, $81 (or $4.38 unit of P), freight equalized from nearest producing point, carload basis; bulk carloads $3 less; in truck loads of less than 10 tons, $10 more. Western slope prices, for delivery at established railroad stations and by truck at regular feed mixing plants: California, Arizona, Nevada and Utah, $99.90; Washington, Oregon, Montana and Idaho, $107.15; bulk carloads $3 less; truck loads less than 10 tons, $10 more.

Columbia, Tenn.: Minimum phosphorus 18.5%, minimum calcium 24% $81, f.o.b. Columbia, in 100 lb. multiwall bags; freight equalized with nearest producing point, carload basis; bulk $3 ton less.

Texas City, Texas: Minimum phosphorus 18.5%, minimum calcium 20%, maximum calcium 23%, maximum fluorine .12%; carload and truck load $75.50, sacked, in 100 lb. multiwall bags, bulk $72.50, f.o.b. Texas City.

Trenton, Mich.: 18½% phosphorus and 23% calcium, bulk boxcar/hopper car $78; bagged $81; 21% phosphorus product production discontinued.

Los Angeles: Demand good; trend steady; supply adequate; 18½% phosphorus $95.10 sacked, unchanged.

Ft. Worth: Demand fair; trend steady; supply adequate; $81.50, sacked, unchanged.

Cincinnati: 18¼% phosphorus $88.80, bagged in carloads; $98.70, bagged in ton lots, f.o.b. Cincinnati; $81, f.o.b. production points, unchanged.

Seattle: Demand good; trend steady; supply limited; $91, ex-dock Seattle, sacked, unchanged.

Denver: Demand good; trend steady; supply ample; $88.50, car load, delivered.

Buffalo: Demand and supply good; trend steady; $82.90, sacked, Boston, unchanged.

DISTILLERS DRIED GRAINS

Boston: Demand fair; trend easier; supply adequate; dark $56, down $1.

Cincinnati: Demand fair; trend steady; supply adequate; $46@46.75, unchanged.

Buffalo: Demand fair to good; trend steady; supply good; $51, Boston, unchanged.

DRIED BEET PULP

Ft. Worth: Demand slow; supply sufficient; plain $55 sacked, November-December, unchanged.

Seattle: Demand fair; trend steady; supply ample; $48, delivered, carlots, sacked, unchanged.

Los Angeles: Demand and trend steady; supply adequate; $48.50@48.70, unchanged.

Boston: Demand fair; supply adequate; trend steady; $53 sacked, down 50¢.

Atlanta: Demand fair; trend steady; supply good; $53.40 sacked, delivered, unchanged.

Denver: Demand good; trend steady; supply ample; $50.

Buffalo: Demand and supply fair; trend steady to lower; $53 sacked, Boston, off 50¢.

Portland: Demand average; supply fair; trend unchanged; $42.50 sacked.

DRIED BUTTERMILK

Chicago: Demand slow; trend firm; supply fair; medium acid $10.25@10.50 cwt., sacked; sweet cream $10.25@10.50.

Los Angeles: Demand good; trend firm; supply tight; 14@14½¢ lb., sacked, unchanged.

Boston: Demand, trend, and supply steady; 14¢ lb., unchanged.

Buffalo: Demand fair; trend steady; supply adequate; $10.75 cwt., f.o.b. Buffalo, unchanged.

DRIED CITRUS PULP

Los Angeles: Demand and trend steady; supply limited; orange pulp $43, lemon pulp $41, both unchanged.

Boston: Demand, trend, and supply steady; $50.17 sacked, unchanged.

Atlanta: Demand fair; trend steady; supply good; pulp $32.50 sacked, f.o.b. Florida production points, unchanged; meal $27.50 @30 sacked, f.o.b. Florida production points, unchanged.

Buffalo: Demand fair; trend steady; supply good; $32.50 sacked, f.o.b. Florida points, unchanged.

DRIED SKIM MILK

Los Angeles: Demand fair; trend steady; supply adequate; 14¢ lb., less than ton lots, sacked; 13¾¢ lb., ton lots, sacked, both unchanged.

Chicago: Demand and supply fair; trend steady; $12.50@13 cwt., sacked.

Ft. Worth: Demand slow; trend steady; supply sufficient; $16.50 cwt., sacked, unchanged.

Boston: Demand and trend steady; supply in balance; 13½¢ lb., unchanged.

Cincinnati: Demand fair; trend steady; supply adequate; 12@13¢ lb., sacked, unchanged.

Buffalo: Demand fair; trend steady; supply adequate; spray $11.85 cwt., f.o.b. Buffalo, unchanged.

Minneapolis: Demand good; supplies tight; price steady at $13.25 cwt.

DRIED WHEY

Ft. Worth: Demand fair; trend steady; supply adequate; standard $4.75 sacked, truck or rail, delivered Ft. Worth; small lots $5.25, f.o.b. warehouse Ft. Worth, unchanged.

Chicago: Demand quiet; trend firm; supply moderate; $4.75 cwt., sacked.

Seattle: Demand steady; trend easy; supply good; $5.70 cwt., ex-warehouse, l.c.l., unchanged.

Kansas City: Demand good; trend steady; supply ample; $4.50 cwt., sacked, unchanged.

Los Angeles: Demand fair; trend steady; supply adequate; $5.10 cwt., carloads, sacked; $5.25 cwt., l.c.l., sacked, both unchanged.

Boston: Demand, trend, and supply steady; $4.85 lb., carlots, unchanged.

Cincinnati: Demand fair; trend steady; supply adequate; $5.75 cwt., sacked, unchanged.

Denver: Demand slow; trend steady; supply ample; $5.25 cwt., car load.

Minneapolis: Supply and demand in balance; price unchanged at $4.75 cwt., f.o.b. shipping point.

FEATHER MEAL (HYDROLYZED)

Los Angeles: Demand slow; trend weak; supply ample; $1 unit of protein, sacked, unchanged.

Ft. Worth: Demand good; trend steady; supply sufficient; exporters taking production of some plants, 85% protein $82@85, delivered Ft. Worth, up $2@2.50.

Memphis: Demand domestic slow, export good; trend steady to higher; supply barely adequate; 85% meal $83, up 50¢.

Boston: Demand and trend steady; supply in balance; $92@95, unchanged.

Atlanta: Demand good; trend steady; supply short; $85, f.o.b. Alabama and Georgia production points, unchanged.

FISH MEAL

Ft. Worth: Demand good; trend steady, offerings limited; sacked; 65% protein, Peruvian $118@119, unchanged; 60% new crop Menhaden $126, unchanged.

Seattle: Demand and supply fair; trend steady; Canadian production $1.90 unit protein, f.o.b. truck Vancouver, sacked, unchanged.

Chicago: Demand very good; supplies at Gulf are hard to get; trend slightly easier at East Coast; Menhaden, East Coast $117 @120, Gulf $118@120; scrap, East Coast $113@116, Gulf $114@116; Canadian herring $1.85@1.95 a unit of protein.

Boston: Demand active; trend firm; supply light; Peruvian early December shipment 65% carlots $118, trucks $120.

Los Angeles: Demand better; trend steady; supply limited; local production 60% protein $1.80½@1.82½ unit, unchanged.

Cincinnati: Demand fair; trend steady; supply adequate; $113.11, unchanged.

Denver: Demand fair; trend steady; supply tight; $1.95 protein unit, f.o.b. West Coast.

Atlanta: Demand good; trend steady; supply limited; 60% Menhaden $115@116 sacked, f.o.b. Atlantic ports, unchanged; Peruvian $114@115 sacked, f.o.b. ports, down $1.

Portland: Demand moderate; supply good; trend unchanged; $2.05 protein unit, sacked.

Buffalo: Demand light; trend higher; supply unavailable; 60% protein, Menhaden $113, f.o.b. Buffalo, up $3.

Minneapolis: Demand fair; supply still tight; Canadian herring still $1.85 a unit, f.o.b. West Coast; 60% West Coast blended steady at $138.

HOMINY FEED

Kansas City: Demand good; trend strong; supply scarce; yellow $36@36.50, unchanged to 50¢ higher.

Memphis: Demand poor; trend steady; supply ample; white $42.80; yellow $42.80, both unchanged.

Chicago: Demand fair; trend steady to $1 down; supply ample; $42.

Seattle: Demand fair; trend firm; supply

(Turn to QUOTES, page 95)

Major Markets Roundup

Ingredient Prices Move in Narrow Range

For the most part, ingredient prices moved in a narrow range during the trading week. Figures compiled by the U.S. Department of Agriculture show the index for all feedstuffs up 0.2 (see table).

Soybean meal's price advance slowed this week in some markets. In markets across the country the product ranged from $2 lower to $4 higher. Soybean meal was in tight supply for nearby shipment in a number of areas.

Millfeeds staged a late week advance in some areas. Improved demand and tight supplies both played a part in the run up in price.

Most buying was on an as-needed basis. Thus activity in the ingredient market depended pretty much on how brisk formula feed demand was in an area.

East

BOSTON: Millfeeds pursued an irregular course in the local market with price changes relatively narrow.

Gainers included alfalfa meal, meat and bone meal, oat feed and hominy feed, the latter advancing $2.50 for the maximum gain of the week. On the easier side were brewers grains, beet pulp, linseed meal, bran, middlings and soybean meal.

BUFFALO: The ingredient market was active and higher, with some switching from scarce, over-priced items to comparable substitutes.

Corn was up 1 to 2¢ on lighter offerings, and oats ran up 2 to 3¢.

Animal tallow weakened ½¢ to a new long-time low of 5½¢ lb.

The upsurge in soybean oil meal was halted as prices held steady. Mixers "don't like present levels" and are buying only on a hand-to-mouth basis, but even this type of demand is enough to hold prices and, in some instances, send them higher. Cottonseed oil meal jumped $3.50, but other vegetable proteins held steady.

Meat scraps rose $2.50 and fish meal advanced $3. Domestic supplies of the latter are practically exhausted and, from now on, mixers will have to rely more on imported meal. Hominy was hard to find and up $3.50.

Millfeeds were strong on increased demand and tighter supplies. Bran gained $3.50; middlings were up $3 and red dog rose $2.

Midwest

CINCINNATI: Volume of business in the ingredient market remained steady this week with supplies adequate to meet the demand.

Cottonseed oil meal and hominy feed advanced 50¢. Brewers dried grains, linseed oil meal and meat and bone scraps were down by $1. Also down were millfeeds and soybean oil meal, by 50¢.

CHICAGO: Cash soybean oil meal remained relatively tight during the week, with this situation being particularly noticeable for unrestricted 44% protein spot shipment. The product was quoted at $65, nominal, up $3.50 for the week.

On the other hand, ETL billing 44% was up only about $1 per ton to $59. In sharp contrast to the unrestricted 44% offerings for spot was the 50% with shipment this week at $69, unchanged from a week back. ETL 50% protein was $2 per ton higher at $65.

MINNEAPOLIS-ST. PAUL: Millfeeds and oat products posted the big gains in the local ingredient market this week. Millfeeds were up 50¢ to $3.50 and oat products were steady to $3 higher. Both products advanced under scarce supply pressure.

In the millfeeds, sacked bran was up $3.50 to $40.50 and middlings were up $3.50 to $41.50. Sacked red dog advanced 50¢ to $43.50. Oat products were up as follows: Sacked feeding rolled, $3 to $85; sacked feeding oatmeal, $2 to $70; sacked crimped, $2.50 to $63.50; sacked pulverized, 50¢ to $46.50.

Soybean meal was $2 lower to 50¢ higher, the 44% being up 50¢ to $54.50.

Alfalfa meal advanced $1.

Animal fat was off ⅛¢ to 5⅜¢ lb., f.o.b. producer's plant. The range on tankage was up $3 to $89 to $94.

ST. LOUIS: Feed ingredient prices largely ruled steady to moderately higher in the week's trading. Demand was active, influenced by a continuing good operating level of formula feed plants.

Buyers showed a strong preference for immediate shipment feedstuffs and, in some instances, notably soybean meal, paid a $2 premium for this week over next week. Spot shipment supplies on brewers grains, millfeeds, hominy feed and cottonseed meal became increasingly harder to locate. No problem was encountered on the same items for shipment a week or so ahead.

The high moisture content of new crop corn delayed harvesting and forced industries to turn to CCC or elevator stocks for grinding needs. Prices held reasonably unchanged, but buyers felt a higher basis was in the offing.

South

ATLANTA: Heavy demand for cottonseed meal exceeds production, both in the Southeast and Mississippi Valley, with practically no offerings. Shipment from many mills is on a scheduled basis only, with prices advancing from $1 to $2 per ton.

Offerings of cottonseed hulls continue to be extremely light with only occasional lots offered at higher than normal prices. Reports received indicate that ginner needs will not be satisfied until late December. Many processors report that November production of soybean meal has been sold, and they are only offering a limited tonnage for December at slightly higher prices.

Cattlemen and dairymen are having to increase their usage of feed due to the dry weather damage to pastures.

MEMPHIS: Ingredients presented a rather mixed price picture here, with the demand only fair to slow.

Soybean oil meal for nearby shipment remains in rather a tight position. Strong prices in the Decatur, Ill., market for quick shipment influenced a firmer tone here. Buying interest was considered fair, and it seems now that November soybean oil meal in Memphis will remain firm.

The dehydrated alfalfa meal market was firm. Offerings were coming out of store, as production for the season came to a halt. A slightly better demand existed, and some trade interests think it possible that further price rise will come within a few weeks. The demand was mostly for nearby shipment.

Oilseed meal futures showed generally higher prices on the Memphis Board of Trade, compared with one week earlier.

Unrestricted soybean oil meal was mixed, $1.25 per ton higher to 25¢ lower, with bulk solvent cottonseed oil meal unchanged to $1 higher. December contracts provided the best gains on the two boards.

Trading activity for the week amounted to 1,100 tons of unrestricted soybean oil meal and 200 tons of bulk solvent cottonseed oil meal.

Southwest

KANSAS CITY: Prices of major ingredients were mostly higher this week with vegetable proteins and millfeeds leading the advance.

Spot soybean meal was in urgent demand and spot cars were commanding $1@2 over prompt shipment cars. Prices for all positions were higher, but the spot cars brought the widest premium.

Demand for cottonseed meal was active and prices $2 to $3 higher with immediate supplies scarce.

Alfalfa prices were unchanged to about $2 higher for the week. Resale supplies and offerings of storage stocks tended to temper the advance by blending interests.

Millfeeds continued to advance in the fore of very heavy flour grind, and demand for the wheat offal was good. Millfeeds were actively purchased by mixers who enjoyed good cattle feed sales. This demand pushed millfeed prices about $3 higher for the week.

FT. WORTH: Compared with recent weeks, changes in prices of feed ingredients were rather small during this week. Most quotations were firm.

Among those advancing were: Millfeeds, 50¢ to $1.50; reground oat feed, $1; dehydrated alfalfa meal, $1 to $1.50, and feather meal, $2 to $2.50.

Soybean meal market settled down somewhat, with the 50% meal unchanged to $1 up, but the 44% was in a little better supply and unchanged to $1 down.

Only meat and bone meal and tankage declined and some suppliers were quoting these prices unchanged, but others were as much as $2 to $2.50 lower.

Feed grain prices were about unchanged from previous week. Demand for feed ingredients has not picked up as much as expected with the cooler weather.

West

SEATTLE: Soybean oil meal continued strong as processors were forced to raise prices for the higher priced raw material. Cottonseed meal also continued firm with the market up another $1 and processors were reluctant to sell.

PORTLAND: Pacific Northwest feed ingredient price changes this week were limited to a 75¢ a ton gain for cottonseed meal.

Quotations for all other items held unchanged during slow trading which saw a strong trend for soybean meal and wheat millfeeds and practically unchanged prices for all of the whole feeding grains.

Local demand for soybean meal continued on a hand-to-mouth basis, with buyers waiting for this ingredient to level off on a new crop basis.

QUOTES

(Continued from page 94)

limited; $52, delivered, carlots, up $1.

Boston: Demand active; trend firmer; supply light; $51.50, up $2.50.

Los Angeles: Demand good; trend firm; supply limited; hominy meal $52; hominy pellets $54, both unchanged.

St. Louis: Demand good; trend firmer; supply limited; yellow $40, unchanged.

Cincinnati: Demand fair; trend steady to higher; supply adequate; $43.50, up 50¢.

Buffalo: Demand fair to good; supply poor; trend higher; $54, Boston, up $3.50.

LINSEED MEAL

Los Angeles: Demand slow; trend steady; supply ample; local production 31% protein $71, unchanged.

Seattle: Demand fair; trend steady; none available; 34% protein (Montana) $89, delivered, car loads, sacked, unchanged.

Chicago: Demand good; trend firm to $1 up; supply fair; Minneapolis basis, solvent $56.50; expeller $62.

Ft. Worth: Demand slow; trend steady; supply sufficient; 34% protein, extracted $72.40, November, unchanged.

Cincinnati: Demand poor; trend steady; supply adequate; new process $56.50, old process $61.50, Minneapolis, down $1.

Boston: Demand poor; trend easier; supply light; $78, down $2.

Buffalo: Demand fair; trend steady; supply fair to good; $56.50, Minneapolis, unchanged.

Denver: Demand fair; trend steady; supply ample; $70.50.

Portland: Demand good; supply fair; trend unchanged; 34% solvent $55.60 sacked.

Minneapolis: Demand fair; supply adequate; 34% solvent strong at $57; expeller $61.50.

Feeds: Average Bulk Prices and Index of Weighted Prices*

(Dollars per ton)

	Nov. 7, 1961	Oct. 31, 1961	Change from previous week
OILSEED MEALS			
Prices at prin. mkts.:			
Soybean meal	69.45	69.60	— .15
Cottonseed meal	61.80	60.95	+ .85
Linseed meal	65.20	65.60	— .40
Copra cake or meal	58.75	58.75	...
Peanut meal	63.00	62.00	+1.00
Index	87.2	87.1	+ .1
ANIMAL PROTEIN FEEDS			
Prices at prin. mkts.:			
Meat meal	80.20	80.60	— .40
Tankage	88.90	88.50	+ .40
Fish meal	113.85	113.85	...
Index	77.1	77.2	— .1
GRAIN HIGH-PROTEIN FEEDS			
Prices at prin. mkts.:			
Gluten feed and meal	44.85	44.85	...
Dist. dried grains	47.45	46.95	+ .50
Brewers dried grains	42.95	43.05	— .10
Index	70.0	69.9	+ .1
WHEAT MILLFEEDS			
Prices at prin. mkts.:			
Bran	41.05	41.25	— .20
Midds. and shorts	42.25	42.45	— .20
Index	75.3	75.6	— .3
OTHER MILLFEEDS			
Prices at prin. mkts.:			
Hominy feed	44.35	43.45	+ .90
Rice bran	32.50	32.50	...
Index	68.3	67.1	+1.2
ALFALFA MEAL			
Prices at prin. mkts.	48.95	48.15	+ .80
Index	94.2	92.7	+1.5
MOLASSES, FEEDING			
Prices at prin. mkts.	26.48	26.58	— .10
Index	78.8	79.1	— .3
ALL FEEDSTUFFS			
Index	81.1	80.9	+ .2
FEED GRAINS			
Prices at prin. mkts.:			
Corn	39.10	38.60	+ .50
Oats	44.90	44.00	+ .90
Barley	48.10	47.30	+ .80
Grain sorghums	38.50	38.10	+ .40
Index	64.3	63.4	+ .9

*Base period of index is 1947-49.
Source: USDA.

MEAT AND BONE MEAL

Boston: Demand good; trend firm; supply fair; $1.20 per protein unit, up 10¢; converted 50% $82, up $5.

Los Angeles: Demand and trend steady; supply ample; 50% protein $1.75 unit, unchanged.

Chicago: Demand fair; trend steady; supply ample; 50% protein $85, sacked.

Seattle: Demand good; trend steady; supply ample; $1.70 unit protein, ex-processing plant, sacked, unchanged.

Ft. Worth: Demand fair; trend steady; supply sufficient; meat and bone $73@75 bulk; $75.50@77.50 sacked, f.o.b. Ft. Worth; unchanged to $2.50 lower.

Kansas City: Demand fair; supply ample; trend steady; 50% scraps $77.50, unchanged.

Memphis: Demand slow; trend barely steady; supply adequate; 50% protein $77, without billing, down $3; 50% protein $79.50, with rail transit, down $3.

St. Louis: Demand good; trend firmer; supply adequate; 50% $80, unchanged.

Cincinnati: Demand good; trend steady; supply good; 50% meat and bone scraps $77.50, Cincinnati, down $1.

Denver: Demand fair; trend steady; supply ample; $75.

Buffalo: Demand good; trend strong; supply very tight; 50% meat scraps $82.50, f.o.b. Buffalo, up $2.50.

Portland: Demand moderate; supply good; trend unchanged; 50% $80 sacked.

St. Paul: Demand fair; supply ample; price $84@88.

MEXICAN PHOSPHATE

Brownsville, Texas: Mexican natural ground rock; 13% phosphorus $39 sacked, bulk $2 less.

MILLFEED

Chicago: Demand very strong; trend 50¢ to $2.50 up; supply moderate; standard bran $40; standard middlings $41.50@42; red dog $43.50.

Seattle: Demand and supply good; trend firm; $39, delivered, common transit points, carlots, up $1.

St. Louis: Demand good; trend firm; supply ample; sacked bran $43, sacked shorts $45, unchanged; bulk bran $39, up $1; bulk middlings $39.50, unchanged.

Kansas City: Demand good; trend strong; supply adequate; sacked bran $39@39.50, up $1.50; sacked shorts $41@41.50, up $1.50; bulk bran $36@36.50, up $2.50; bulk shorts $37@37.50, up $3; bulk middlings $37@37.50, up $3.50.

Los Angeles: Standard millrun $44@44.50, slower demand, weaker trend, larger supply, down 50¢; red bran $51@52, slower demand, firmer trend, ample supplies, 50¢@$1 higher.

Ft. Worth: Demand good; trend firm;

MILLFEED • FEED GRAIN
FEED INGREDIENTS
What Do You Need?
—Jerry Parks
633 Board of Trade
KANSAS CITY, MISSOURI

offerings light for immediate; bran, bulk $42, burlaps $47; gray shorts, bulk $45, burlaps $49; midds., bulk, $44.50, delivered Texas common points; bulk bran up 50¢; bulk shorts up $1.50; midds. up $1.50; sacked bran and shorts up $1.

Memphis: Demand fair; trend steady; supply ample; wheat bran $41.80; gray shorts $42.80; standard midds. $41.80, all unchanged.

Boston: Demand fair; trend easier; supply ample; bran $49, down $2.10; middlings $51, off 10¢.

Cincinnati: Demand fair; trend steady; supply adequate; bran $42.50, middlings $45.50, down 50¢.

Denver: Demand very good; supply tight; trend steady; shorts $44.75, bran $42.75, millrun $43.75.

Buffalo: Demand good; trend higher; supply fair; bran $43.50, up $3.50; middlings $44.50, up $3; red dog $48.50, up $2; all prices f.o.b. Buffalo.

Portland: Demand light; supply good; trend unchanged; $42.50.

Minneapolis: Demand good; supplies limited; prices sharply higher; sacked bran up $3.50 to $40.50; sacked middlings up $3.50 to $41.50; sacked red dog up 50¢ to $43.50.

MOLASSES

Memphis: Demand fair; trend weak; supply ample; blackstrap 12½@13¢ gal., tank car, f.o.b. New Orleans, unchanged; $28.03 ton, delivered Memphis, truck, down 43c.

Seattle: Demand and supply good; trend easy; $25.75, f.o.b. Seattle, tank truck lots, unchanged.

Ft. Worth: Demand fair; trend steady; supply sufficient; blackstrap 13¾¢ gal., f.o.b. Houston; truck $30.21, delivered Ft. Worth; seller's market price on date of shipment; unchanged.

Boston: Demand good; trend steady; supply plentiful; 16½¢ gal., tank cars, unchanged.

Kansas City: Demand slow; trend steady; supply ample; 12⅝¢ gal., New Orleans, unchanged.

Los Angeles: Demand good; trend steady; supply ample; $24.50, f.o.b. tank cars; $24.75, f.o.b. tank trucks; both unchanged.

St. Louis: Demand good; trend easy; supply ample; blackstrap 12½¢ gal., tank cars, New Orleans, down ⅛¢.

Cincinnati: Demand fair; trend steady; supply adequate; 13¢ gal., New Orleans, unchanged.

Atlanta: Demand good; trend steady; supply limited; citrus $20, f.o.b. Florida processing plants, unchanged.

Denver: Demand fair; trend steady; supply ample; $32.70, tank car.

Buffalo: Demand fair to good; supply good; trend steady; 16½¢ gal., f.o.b. Albany, unchanged.

Minneapolis: Demand fair; supplies adequate; prices unchanged at $35 for blackstrap, tank truck, delivered Twin Cities; $31 for beet; $32 for blend.

OAT PRODUCTS

Boston: Demand spotty; supply adequate; trend unsettled; white pulverized $54.60 sacked, unchanged; reground oat feed $25, up 90¢.

Ft. Worth: Demand slow; trend steady; supply sufficient; 10% protein oat millfeed $41, sacked, unchanged; reground $24.40, up $1.

St. Louis: Demand fair; trend steady; supply adequate; white pulverized $43, unchanged; reground oat feed $13.50, unchanged.

Chicago: Demand and supply fair; trend irregular; reground oat feed $10.50@11; No. 1 fine ground feeding oatmeal $72; feeding rolled oats $75@78.

Seattle: Demand fair; trend steady; supply good; 38 lb. or better $51, delivered truck lots, unchanged.

Minneapolis: Demand fair; supply scarce; prices sharply higher; sacked feeding rolled up $3 to $85; sacked feeding oatmeal up $2 to $70; sacked crimped up $2.50 to $63.50; sacked pulverized up 50¢ to $46.50; sacked oat feed steady at $20.

Buffalo: Demand and supply fair; trend steady; $25.50 sacked, Boston, unchanged.

Kansas City: Demand good; supply adequate; trend steady; oat mill by-product $16.50@17, up $1; feeding rolled oats $74@75, unchanged.

Cincinnati: Demand poor; trend steady; supply adequate; pulverized white oats $47, unchanged.

PEANUT OIL MEAL

Los Angeles: Nothing available.

Atlanta: Demand good; trend steady; supply short; 45% solvent process $63, f.o.b. Alabama production mills, up $1.

POULTRY BY-PRODUCTS

Ft. Worth: Demand good; supply scarce; $87.50@90 sacked, f.o.b. Texas plants, unchanged.

Los Angeles: Demand good; trend steady; supply adequate; $1.55 unit of protein, sacked, unchanged.

Memphis: Demand slow; trend steady; supply adequate; 55% meal $82.50 sacked, up $2.50.

Boston: Demand, trend, and supply steady; $85, unchanged.

Atlanta: Demand good; supply limited; trend stronger; meat meal $76, f.o.b. Alabama and Georgia production points, up $1.

RICE BY-PRODUCTS

Ft. Worth: Demand fair; trend steady; light offerings standard rice bran, sufficient on solvent; standard rice bran, $37 sacked, f.o.b. Houston; solvent rice bran $30.50 bulk, $34.50 sacked, f.o.b. Texas rice mill, unchanged.

Buffalo: Demand only fair; trend steady; supply good; $56 sacked, fo.b. Buffalo, unchanged.

Los Angeles: Demand slow; trend firm; supply very limited; California production high fat content bran $53 sacked, unchanged.

Atlanta: Demand fair; trend stronger; supply limited; bran $46 sacked, delivered, up $1.50.

SCREENINGS

Chicago: Demand fair; trend unchanged; supply moderate; ground grain $30.50; Canadian $24.

Buffalo: Demand and supply fair; trend steady; ground, sacked $33.50, New York, lake and rail, unchanged; unground, bulk $27.50, New York, unchanged.

Minneapolis: Demand slow; supplies adequate; prices unchanged; unground Canadian $19; domestic lights $3@10; domestic mediums $12@20; domestic heavies $20@28; 15% flax screenings $40.

Los Angeles: Demand slow; trend steady; supply adequate; ground barley $35 sacked, unchanged.

Cincinnati: Demand fair; trend steady; supply adequate; unground grain screenings $18.75@20.75, unchanged.

SOFT PHOSPHATE
(Sacked, delivered)

Atlanta: $20.25.
Buffalo: $26.50.
Chicago: $24.96.
Cincinnati: $23.64.
Des Moines: $25.42.
Kansas City: $25.07.
Memphis: $22.28.
Minneapolis: $26.12.
Philadelphia: $24.51.
St. Louis: $24.33.

SOYBEAN OIL MEAL

Minneapolis: Demand fair; supplies scarce; 44% up 50¢ to $54.50, Decatur; 50% off 50¢ to $61.50; 41% expeller off $2 to $60.

Portland: Demand slow; trend unchanged; supply good; 44% $80.60, 50% $87.60.

Buffalo: Demand and supply fair; trend steady; $57.50 bulk, Decatur, unchanged.

Memphis: Demand fair; trend steady; supply ample; prime 44% solvent $63, f.o.b. Memphis, down $2.

Chicago: Demand very good on 44%, fair for 50%; trend steady to $3.50 up; supply light; Decatur basis, 44% protein, unrestricted billing $61.50; E.T.L. $58; 50% protein, unrestricted $69 and E.T.L. $65.

Seattle: Demand fair; trend strong; supply ample; $81, delivered, carlots up $4.

Boston: Demand cautious; trend easier; supply ample; 44% $57, down $1.50; 50% $65, down $1.

Los Angeles: Demand slow; supply adequate; trend steady; $80.60, unchanged.

Ft. Worth: Demand good; trend steady; offerings light for nearby delivery; 44% $69@71.50, November, unchanged to $1 down; 50% $76.50@77.50, November, unchanged to $1 up.

Kansas City: Demand good; supply adequate; trend stronger; 44% solvent $58.50 @59, Decatur, up $1.50.

St. Louis: Demand good; trend firm; supply scarce for nearby; 44% $62, Decatur basis, down $1.

Cincinnati: Demand good; trend steady to higher; supply tight; $62, Decatur, down 50¢.

Denver: Demand good; trend steady; supply ample; $70.50.

Atlanta: Demand good; trend steady; supply tight; 44% $69.70, delivered, up $1.10.

TANKAGE

St. Paul: Demand good; supply fair; price range increase $2 to $89@94.

Kansas City: Demand fair; trend steady; supply adequate; 60% digester $87.50, down $2.50@5.

Cincinnati: Demand good; trend steady; supply ample; 60% digester $87.50, Cincinnati, unchanged.

Chicago: Demand and supply fair; trend firm; 60% protein $95 sacked.

Ft. Worth: Demand good; trend steady; supply sufficient; 60% digester $87.50 sacked, Ft. Worth, down $2.50.

UREA FEED COMPOUND

Woodstock, Tenn.: Minimum 42% nitrogen, 262% protein equivalent; $105 bagged, $99 bulk, delivered in all states east of and including New Mexico, Colorado, Wyoming and Montana.

LaPlatte, Neb., and South Point, Ohio: Minimum 42% nitrogen, 262% protein equivalent $96, f.o.b. bagged; $90, bulk, cars or trucks; freight equalized with nearest producing point.

Pryor, Okla.: Minimum 42% nitrogen, 262% protein equivalent, $95 bagged, $91 bulk, f.o.b. Pryor, freight equalized with nearest producing point; $100 bagged, $96 bulk, delivered in cars or trucks to New Mexico, Colorado, Wyoming and all states to the East.

VEGETABLE AND ANIMAL FAT (HYDROLYZED)

Ft. Worth: Demand good; trend steady; supply sufficient; 5¢ lb., f.o.b. north central Texas, unchanged.

Los Angeles: Demand good; trend steady; supply adequate; 5¾¢ lb., unchanged.

PROTEINS

(Continued from page 1)

average price under the $60.60 ton level of 1960-61.

Cottonseed meal—Little or no change is expected. An average price near the 1960-61 level of $56 ton is seen.

Linseed meal—Processors will be paying more for flaxseed and supplies are expected to be relatively tight, so the outlook here is for prices in 1961-62 to average above the 1960-61 average of $54 ton.

Peanut and copra meals—Little change is expected in supplies although both may be a little smaller than last year.

Inedible tallow and greases—It is currently indicated that rising output and large stocks will peg the average 1961-62 price near 5-6¢ lb.

Meat meal and tankage—Production may be somewhat above the 1,680,000 tons estimated for 1960-61 as a result of heavier livestock slaughter.

Fish meal—Supplies are difficult to estimate because the major fishing season doesn't start until spring. With heavy poultry production anticipated for 1961-62, fish meal requirements and supplies may again be large, somewhere near the estimated production and imports of 525,000 tons in 1960-61.

Grain high-protein feeds—Except for distillers dried grains, little change is expected in feeding of grain protein feeds.

Molasses—Supplies are expected to remain adequate in 1961-62.

Total Supply Up 15%

The total U.S. supply of edible fats, oils and oilseeds during the 1961-62 marketing year is forecast at a record 16.1 billion pounds (in terms of oil)—15% more than the quantity available a year earlier. This increase in production is largely due to the record 1961 soybean crop.

The 1961-62 supply of soybeans in the U.S. has been placed at 716 million bushels, up 134 million from the previous year, and a sharp increase in carryover stocks on Oct. 1, 1962, will occur, USDA economists observe.

Soybean Crushings

Soybean crushings during the 1961-62 marketing year are forecast at 425 million bushels, a gain of about 23 million bushels from 1960-61. A crush of this size would produce about 10 million tons of soybean meal, up about 6% from the meal output of 9.4 million tons in 1960-61.

The new season's crush will be limited by a record carryover of soybean oil on Oct. 1—2½ times greater than a year earlier. On the other hand, USDA observes, the Food for Peace program is expected to pick up momentum, which would stimulate crushings.

Domestic use of soybean meal in 1961-62 is expected to be somewhat greater than in 1960-61. Poultry requirements will remain high, the hog population is expected to be up slightly, there'll be more cattle on feed and feeding ratios should be favorable (see related stories). But there is likely to be an ample supply of soybean meal, and prices are expected to average slightly lower in 1961-62.

Domestic availability of soybean meal is expected to be held down to some extent by exports. USDA expects exports of meal in 1961-62 to increase somewhat from last year's 600,000-ton level and probably will not differ much from the 1959-60 record of 652,300 tons.

"Allowing for about the same carryover of soybean meal on Oct 1, 1962, as on that date this year, and allowing for increased exports, the quantity of soybean meal available for feeding in 1961-62 would total around 9.4 million tons, up slightly from the last feeding year," USDA says.

Soybean meal prices probably will be more stable than in 1960-61 and they are expected to average slightly lower than the $60.60-per-ton average of last year.

Cottonseed Meal

Prices of cottonseed meal for the entire 1961-62 feeding year may be a little more stable than last year, but they're expected to average out at near $56 ton, the same as in 1960-61.

The total supply of cottonseed meal will not be much different from that of a year earlier.

Output of linseed meal in 1961-62 probably will be a shade under the previous year because of a slight decline in the crush and sharply reduced supplies of flax. Total tonnage fed may be around 350,000 tons. Linseed meal prices for the 1961-62 feeding year probably will average slightly above the 1960-61 average of $54 ton, mainly because processors will be paying a much higher price for flaxseed this year than last, crushings will be down slightly and supplies of linseed meal will be relatively tight.

Inedible Tallow

The price outlook for inedible tallow and greases hinges upon the strength of export demand because little change is in prospect for domestic disappearance. Prices may be more stable than last year and probably will average in the 5-6¢ lb. range as output rises and stocks remain large.

Grain Proteins

Supplies of both gluten feed and meal and brewers dried grains may average near the 1,098,000 tons and 249,000 tons, respectively, fed in 1960-61.

An increase in the production of distillers dried grains is expected to result from the use of surplus Commodity Credit Corp. corn to replace molasses in the manufacture of alcohol. Under a contract completed in June, 14 million bushels of CCC corn will be processed into alcohol by Publicker Industries, Inc., Philadelphia, which could yield over 50,000 tons of distillers dried grains, but sales of this feed are not to exceed 4,000 tons a month and may continue for as long as 18 months.

USDA notes that if the maximum sales per month are made in 1961-62 and the output of other distillers is unchanged, the quantity available for feeding would total close to 400,000 tons, compared with the 350,000 tons fed in 1960-61.

Molasses

USDA says supplies of molasses in 1960-61 declined from the near record level of 1959-60 due to a sharp cutback in Cuban imports. However, the total supply in 1959-60 was very large and it is quite possible that a larger proportion than usual was carried over into 1960-61.

The supply of molasses in 1961-62 should again be adequate. Domestic sugar cane and sugar beet production were indicated as 20 and 14%, respectively, above 1960. Imports may be as large as in 1960-61.

FEED

(Continued from page 1)

for 1961-62 isn't lower, but are eager to point out that "the reduction for 1960-61 . . . is significant in that it follows eight years of increasing supplies."

The total supply of feed concentrates per animal unit is estimated at about 1.48 tons or 5% below the record supply in 1960-61. USDA says livestock numbers in terms of grain-consuming animal units are expected to increase about 2% to 170 million animal units in 1961-62. The rate of feeding in 1961-62 may be a little lower, however.

More hogs are expected to be fed for market in 1961-62 and a further increase in cattle feeding now appears probable. Poultry production in 1961-62 is expected to be about as large as in 1960-61 (see related stories).

USDA expects feed prices to continue below average in relation to prices of livestock and livestock products, although they may be a little less favorable in 1961-62 than during most of the past three or four years.

In 1961-62, lower hog prices and higher corn prices are expected to make the hog-corn price ratio less favorable to hog producers, although, according to USDA, it probably will continue above the 1950-59 average of 13.7.

A moderate decline in the beef cattle-corn price ratio is anticipated, but it may continue above the 10-year average.

Poultry Feed Costs

Poultry feed costs probably will average a little higher in 1961-62 than during the past year, and little, if any, improvement is in prospect for broiler- and turkey-feed price relationships. Egg prices are expected to be a little below the 10-year average in relation to poultry ration prices during 1961-62.

Prices of dairy products are expected to continue above the 10-year average in 1961-62.

High-Protein Feeds

The total tonnage of high-protein feeds available for feeding in 1961-62 is expected by USDA to be a little larger than in 1960-61 when a record 15.5 million tons were available (see related story). The feed survey com-

CORN AND SOYBEAN CROP SIZES ADJUSTED

WASHINGTON—The U.S. Department of Agriculture's Nov. 1 crop report revealed when issued this week that there has been an increase of 20 million bushels of corn since the Oct. 1 report. And the soybean estimate has declined by about 10 million bushels to approximately 700 million.

These figures were hit right on the nose last week in a crop forecast by Dallas Western, agronomist for Quaker Oats Co.

mittee of the American Feed Manufacturers Assn. has estimated that high-protein feed supplies will exceed anticipated feed use by 6% (Feedstuffs, Nov. 4, page 1).

Supplies of each of the four feed grains—corn, grain sorghum, oats and barley—are smaller this year than in 1960-61. The 1961-62 corn supply is estimated at 5,526 million bushels, 153 million bushels below the record supply last year.

Feed grain prices are a little higher this fall than a year ago and USDA expects them to average higher in 1961-62 than in 1960-61, mainly because of increased price supports for 1961 crops, smaller production of feed grains this year and prospects for more livestock to feed in 1961-62.

STORAGE

(Continued from page 1)

dity Credit Corp. The cost of this storage to the government is estimated by USDA at approximately $425 million per year.

USDA said the review and updating will cover 100 warehouse firms, all of which were included in the 1959 study. The same basic questionnaire, with minor refinements, will be used again.

To Study Changes

Results of the upcoming storage survey are expected by USDA to enable the department to study changes which may have occurred in storage costs since the 1959 survey and also to provide additional information for "more complete analysis and review of the entire grain storage operation."

Department officials also say the review will give USDA "reliable and up-to-date" information which will be taken into account prior to any re-examination of rates currently in effect under the Uniform Grain Storage Agreement. And, according to USDA, "it will help to assure economical and efficient operation of the program as well as fair and equitable contracts with the more than 11,000 firms who store grain for CCC."

Statistical Sampling

Selection of warehouses to be covered has been made on a statistical sampling basis. This selection, USDA officials say, will be statistically representative of all areas and types of storage facilities and will be based on the latest fiscal year for which complete records are available. Information furnished by warehousemen and identity of firms will be held in confidence as in the previous survey, USDA said.

Observers here are noting that the associate director of the Commodity Stabilization Service at this time is Edwin Jaenke, who was an investigator assigned from the office of Sen. Stuart Symington (Mo., D.) when he conducted a sub-committee examination of the activities of CCC in the closing session of the 86th Congress.

DIVIDEND DAY HELD

IPSWICH, S.D.—Zip Dividend Day was sponsored by Jones Mobile Milling Co., Ipswich, in which premiums were given to persons ordering Zip Feeds. Representatives of Zip Feed Mills, Sioux Falls, were present to discuss feeds and feeding.

Wirthmore Mills Vice President Appointed

WALTHAM, MASS.—John P. Lauber has been appointed vice president of Wirthmore Mills, Toledo, Ohio, according to Granville M. Bond, president of Wirthmore Feeds, Inc., Waltham.

Mr. Lauber, who was recently promoted to general manager, started in the grain trade with the Kasco Feeds organization in 1945. He joined Wirthmore Mills in 1954 and, until recently, had been credit manager.

CORNELL

(Continued from page 7)

the infection in considerable doubt. At normal vitamin levels, findings of decreased survival time with increased protein levels were consistent. But with high vitamin levels, going from a protein deficiency to a sufficiency is deleterious, while going to an excess from a sufficiency is beneficial.

One other thing considered was balance of vitamin level to protein level. Vitamin level was doubled when protein level was doubled, and the vitamin level was tripled when protein was tripled. Again the higher protein resulted in greater mortality at the normal vitamin level. When vitamin level was kept proportional to protein level, there was no significant difference in mortality rate or total mortality. These findings indicate that relationship between vitamin level and protein level is extremely important in these studies. In fact, the effect of protein level on response of chicks to the infection studied cannot be stated without also stating the vitamin level.

Dr. Hill also observed that the studies do not preclude the possibility of interrelationships between protein levels and other nutrients. Furthermore, there is no assurance that one can transpose the results obtained with one kind of infection to another. It previously had been noted that research on some other diseases had shown greater resistance to disease with higher protein levels.

At any rate, the whole subject is complex, but the role of nutrition in disease control merits serious study.

VITAMIN A REQUIREMENTS OF POULTRY IN HEALTH AND DISEASE—A paper presented by Dr. M. L. Scott of Cornell brought out that while effects of vitamin A were variable from experiment to experiment, the results indicated strongly that adequate vitamin A nutrition above minimum levels needed for growth is of primary importance in prevention of the severe lesions and losses from CRD as well as coccidiosis.

Dr. Scott said results demonstrate that the minimum level of vitamin A found to be required for growth and feed conversion under excellent environmental conditions may be considerably short of the amount needed to provide fullest integrity of the mucous epithelium and sufficient liver storage for periods of emergency such as outbreaks of coccidiosis, or those stresses which result in severe losses from CRD.

CURRENT INTERPRETATIONS OF THE DIETARY FAT-CHOLESTEROL CONTROVERSY—Dr. R. H. Barnes of Cornell reviewed information on this timely subject and outlined evidence which has been presented on both sides of the idea of a causal relationship between dietary fat and heart disease. In doing this, he showed why much more information is needed before general recommendations can be made which will affect the dietary practices of the general public and which may have serious repercussions upon agriculture and the feed and related industries.

Many authorities have said that no one should make significant changes in his diet without medical advice, but many persons have concluded from medical reports which have reached the public that if a major dietary change is good for individuals who have had heart attacks, such a regimen must also be good for them.

Dr. Barnes said it will be necessary to publicize widely the serious gaps in scientific knowledge that emphasize the ill-advisability of premature recommendations of dietary changes. At the same time, he cautioned that agriculturalists should not necessarily feel that the fat controversy is a passing fad.

"There is an element of faddism to be sure," he said, "but the tremendous scientific effort devoted to the problem will some day give us the necessary facts. These facts may turn out to be contrary to current agricultural interests. There is very good reason to believe that animal fats, in general, should be consumed with greater moderation. This suggests the need for leaner animals, lower milk fat production and perhaps even the desirability of finding means of altering the composition of eggs. Agriculture will be in an indefensible position if it devotes all of its effort to a propaganda battle. It must be prepared for whatever changes medical science and the public demand."

MODIFYING ANIMAL PRODUCTS THROUGH NUTRITION—The composition of animal products can be varied through nutrition of the animal, but this has been done purposely in only a few ways in animal production. To make best use of animal agriculture, greater attention to the composition of end products is needed.

This was brought out by Dr. F. W. Hill, formerly at Cornell and now poultry husbandry department head at the University of California.

Changing concepts in human nutrition have focused attention on the role of fats, and a paper by Dr. Hill and Dr. D. W. Peterson of California reviewed what is known about changes in fat content and fatty acid composition which can be achieved. While Dr. Hill's review did not go into detail on other nutrients, it was noted that modifications of other than fat also can be made. For example, the concentration of vitamins and some minerals can be changed through nutrition. Such things as this were said to merit consideration in the over-all concept of achieving optimal composition of foods from animal production.

Fat Content of Animal Products—Degree of fattening in meat animals can be controlled to a considerable extent in ad libitum feeding by adjustment of energy concentration and energy-protein balance. In extreme cases, as in swine and ducks, range of control so achieved is not sufficient for practical purposes, so either food restriction or hormone administration is necessary.

The level of fat in cow's milk is primarily determined by genetics. Nutritional effects are relatively temporary. Form of the ration, however, can exert a major influence; for example, rations low in roughage and high in concentrate can produce a marked lowering of fat content.

The amount of fat in an egg is relatively unaffected by diet. The amount of cholesterol in eggs is not influenced by nutrition of the hen.

Influence of Nutrition on Composition of Fat—Dr. Hill reviewed information on fatty acids in animal tissues as influenced by feeding, and information was presented covering pork, poultry, eggs and ruminants. (Also see story on page 10 summarizing a paper by Dr. Peterson at the California Animal Industry Conference.)

One example of the information brought out by Dr. Hill is the finding that feeding highly unsaturated fat to poultry even at low levels readily increases the unsaturation of the carcass fat.

Composition of fat in ruminant products, including milk and beef, is relatively difficult to affect by dietary fat. However, factors which affect rumen function can affect fat composition.

ESSENTIAL FATTY ACIDS FOR POULTRY—A paper presented by D. T. Hopkins of Cornell showed that one can no longer talk of fats as just fats. Different nutritive properties of fats must be considered.

Mr. Hopkins noted that studies have established that chicks require a dietary source of essential fatty acids. Linoleic, arachidonic and possibly linolenic acid are the substances termed essential fatty acids.

Many studies have shown that liquid vegetable fats in purified diets for chicks consistently cause an increase in growth rate. The response is not due to an increase in energy concentration but is due to a specific effect of fat per se or to a component of these fats. Apparently the largest portion of the response is due to the fatty acid fraction.

Studies at Cornell were made to investigate the portion of the growth response from vegetable fats which can be explained by the linoleic acid content when tested with chicks deficient in essential fatty acids. Mr. Hopkins went on to tell of a comparison of several vegetable oils and of studies with pure fatty acid esters.

It was shown that the linoleic acid content of certain fats seems to be responsible for most of the improved chick growth when these fats are added to purified diets. However, chicks fed soybean oil have grown slightly faster than chicks fed pure linoleic acid. Whether this is a real difference or due to experimental error will be determined only by further study. The diets used in the studies have been very low in essential fatty acids.

The requirement of the chick for linoleic acid remains to be determined. Until this is done, one cannot assess the importance of the findings in practical poultry rations, said Mr. Hopkins. Most poultry feeds containing a high level of corn contain 1.0 to 1.5% linoleic acid from corn oil. Further work is needed to assess the role of additional linoleic acid under these conditions.

ALL-CONCENTRATE

(Continued from page 7)

on to caution that the researchers are not at the point where they can recommend rations used in the research to producers.

Latest Equipment

The fourth experiment has recently been in progress to determine the applicability of all-concentrate feeding to a more practical system than attempted in previous studies. Forty Hereford steers, averaging 675 lb. initially, were assigned on the basis of body weight to 8 lots with 5 animals per lot. Two lots of steers are fed, ad libitum, a basal ration consisting of 90% ground shelled corn, 6% soybean meal, 2% animal fat, 1% limestone and 1% trace mineralized salt. Vitamin A and D concentrates are added to meet NRC recommendations. The remaining six groups also are fed the basal ration, ad libitum; and, in addition, two groups receive 0.8 lb. of calcium carbonate per head daily, two groups receive 3 lb. of grass hay per head daily, and two other groups receive hay ad libitum. All lots are concrete floored, and ground cobs are used for bedding in lots in which roughage is fed.

Average daily gains after 100 days on experiment were 3.12 for the group fed the basal alone, 2.87 for those receiving calcium carbonate, 3.11 for steers receiving limited hay and 3.24 for the groups fed hay ad libitum.

After 149 days, average daily gains, respectively, were 2.76, 2.49, 2.83 and 2.88. Feed per unit of gain was 6.66, 6.74, 6.84 (plus 1.09 of hay) and 6.78 (plus 2.07 of hay). It was noted that amounts of basal ration per unit of gain were about the same, whether or not hay was fed. Figures on TDN/gain were 5.33, 5.39, 6.02 and 6.46.

Chicks Placed in Principal Broiler Areas

(000's omitted)

Week ending	Maine	Conn.	Penn.	Ind.	Ill.	Mo.	Del.	Md.
September 2	1,182	319	718	693	112	744	1,580	2,085
September 9	1,240	268	736	613	57	787	1,623	1,914
September 16	1,166	256	683	658	74	643	1,518	1,945
September 23	674	269	655	521	72	639	1,407	1,918
September 30	1,126	291	625	478	57	649	1,379	1,937
October 7	1,137	248	644	494	56	573	1,355	1,667
October 14	1,058	219	600	449	66	607	1,259	1,853
October 21	953	236	432	456	18	593	1,184	1,888
October 28	1,158	257	539	455	38	571	1,514	1,907
November 4	1,165	242	701	517	65	679	1,529	2,056

Week ending	Va.	W. Va.	N.C.	S.C.	Ga.	Fla.	Ala.	Miss.
September 2	807	340	3,205	380	6,017	243	3,551	2,402
September 9	818	381	3,205	385	6,129	220	3,401	2,225
September 16	917	249	3,130	363	5,834	199	3,343	2,134
September 23	682	369	2,989	345	5,661	216	3,286	2,098
September 30	736	247	3,029	379	5,712	156	3,376	2,156
October 7	739	245	2,979	348	5,325	151	3,388	2,001
October 14	712	273	2,889	345	5,455	157	3,372	1,944
October 21	711	245	2,738	322	5,274	174	3,204	1,926
October 28	666	176	2,761	373	5,433	198	3,278	2,138
November 4	716	263	2,816	316	5,512	201	3,474	2,123

Week ending	Ark.	La.	Texas	Wash.	Oregon	Calif.	Total 22 areas 1961	Total 22 areas 1960
September 2	3,996	378	2,263	298	184	1,098	32,595	29,496
September 9	3,765	381	2,056	269	208	1,081	31,762	29,246
September 16	3,713	348	1,922	225	170	979	30,389	28,624
September 23	3,564	382	1,816	282	141	980	28,966	28,656
September 30	3,616	402	1,782	234	174	1,067	29,610	28,551
October 7	3,579	394	1,644	296	176	1,082	28,548	28,442
October 14	3,468	407	1,632	291	141	1,049	28,246	28,355
October 21	3,441	337	1,780	261	78	943	27,094	28,165
October 28	3,312	360	1,726	221	109	948	28,128	28,639
November 4	3,107	397	1,759	235	148	945	28,986	29,157

HATCHING EGG

(Continued from page 6)

established available supply of hatching eggs for the allotment period.

(b) Application. Each handler seeking an allocation base for the allotment period shall, not later than six weeks preceding such allotment period, or prior to such date as the committee may prescribe for the initial allotment period, file with the committee an application therefor on forms prescribed by the committee which shall provide all pertinent information required by the committee.

(c) Committee verification. The committee shall check and determine the accuracy of the information submitted pursuant to this section and shall be authorized to make a thorough investigation of any application. Whenever the committee finds an error, omission, or inaccuracy in any such information, it shall correct the same and shall give the person who submitted such report a reasonable opportunity to discuss with the committee the factors considered in making the corrections. In the event of correction of a base, the allotment assigned to the handler pursuant to paragraph (d) of this section shall likewise be corrected.

(d) Handler allotments. Each handler who has an allocation base for the allotment period shall be assigned an allotment of hatching eggs which he may set, or cause to be set, during the allotment period computed by determining the percentage which such handler's allocation base is of all allocation bases of all handlers and multiplying the desirable hatch as established by the Secretary for the allotment period, by the percentage so computed. The result shall be the handler's allotment for the allotment period and no handler shall set, or cause to be set, a greater number of hatching eggs in the allotment period than the total quantity so allotted to him, Provided, however that a handler who does not set, or cause to be set, his total allotment of hatching eggs within an allotment period, may carry over such unused allotment into the succeeding allotment period, but not more than such percentage of such allotment as may be prescribed by the Secretary thus may be carried over.

(e) Allotments by periods. The Secretary may establish, within the quantity or allotment set for all handlers during an allotment period under this section, the portions thereof to be utilized during quarters or other periods of the allotment period by all handlers and the committee shall prorate such amounts among the handlers in the manner prescribed by this section, for apportionment of the allotment for the allotment period.

(f) Transfer of bases and allotments. Allocation bases and allotments shall not be transferable except as authorized by regulations recommended by the committee and approved by the Secretary and then only in the following circumstances:

(1) In the event of a transfer of the hatchery, to the person acquiring and continuing the use of such hatchery.

(2) The whole or any part of a base or allotment may not be transferred to any other hatchery, except where fire, flood, or other similar occurrence prevents the use of such hatchery for all or part of the allotment period. Provided, that the base or allotment of a handler who caused his eggs to be hatched at a hatchery other than his own in the base period, may be used by that handler at any hatchery.

§ **E-49 Prohibition against handling in excess of allotment**—No handler shall set, or cause to be set, hatching eggs in excess of his allotment or set hatching eggs without allotment, Provided, that a handler with respect to allotments made under paragraph (d) of section 48 may use the unused portion of his allotment for the handling of hatching eggs in a period within the allotment period but only during the ensuing period within such year, and to the extent allowed under paragraph (e) of section 48 a handler may handle in the ensuing allotment period such unused percentage of his allotment as may be authorized by the Secretary in paragraph (d).

Method No. 2

§ **E-50 Desirable quantity**—The Secretary may establish the desirable quantity of hatching eggs for the allotment period which all handlers may receive at hatcheries for hatching in the allotment period.

§ **E-51 Acquisition bases and allotments**—Whenever the Secretary has established a desirable quantity of hatching eggs which may be received at hatcheries for the allotment period, the committee shall prorate such quantity among handlers of hatching eggs by establishing an allocation base and allotment for the allotment period, referrable to each producer of hatching eggs and computed as follows:

(a) Allocation bases. Each producer of hatching eggs shall be assigned an allocation base computed at his option in one of the following ways:

(1) The producer's total marketings or use of hatching eggs in the 12-month period ending Sept. 30, 1961 or in such other period as may be prescribed by the Secretary, or

(2) The producer's total marketings or use of hatching eggs in the 24-month period ending Sept. 30, 1961, or in such other period prescribed by the Secretary which shall be double the period specified in paragraph (1); divided by two, or

(3) A producer who produced no hatching eggs in the period designated in (1) hereof, or whose production of hatching eggs in such period was not representative, and who can establish that he has facilities for the production of hatching eggs and has breeder hens for that purpose, may be assigned an allocation base by the committee in accordance with recommendations made by the committee and approved by the Secretary, which shall take into consideration his establishment's production capacity and his established available breeder hens for the allotment period.

(b) Application. Each producer seeking an allocation base for the allotment period shall, not later than six weeks preceding such allotment period, or prior to such date as the committee may otherwise prescribe, file with the committee an application therefor on forms prescribed by the committee, which shall supply all pertinent information required by the committee.

(c) Committee verification. The committee shall check and determine the accuracy of the information submitted pursuant to this section and shall be authorized to make a thorough investigation of any application. Whenever the committee finds an error, omission, or inaccuracy in any such information, it shall correct the same and shall give the person who submitted such report a reasonable opportunity to discuss with the committee the factors considered in making the corrections. In the event of correction of a base, the allotment assigned to the producer pursuant to paragraph (d) of this section shall likewise be corrected.

(d) Allotments. Each producer who has an allocation base for the allotment period shall be assigned an allotment of hatching eggs which handlers may acquire during the allotment period, computed by determining the percentage which such producer's allocation base is of all allocation bases of all producers, and multiplying the desirable quantity to be acquired by all handlers, as established by the Secretary for the allotment period, by the percentage so computed. The result shall be the producer's allotment for the allotment period and no handler or handlers may acquire a greater number of hatching eggs from such producer in the allotment period than the total quantity allotted to such producer.

(e) Allotments by period. Whenever the Secretary finds from the recommendations and information supplied by the committee, or from other available information, that such regulation may tend to effectuate the declared policy of the act, he may establish, within the quantity or allotment to be acquired by all handlers during an allotment period, the portions thereof to be acquired during quarters or other periods of the allotment period by all handlers and the committee shall prorate such amounts among the producers in the manner prescribed by the foregoing paragraphs for apportionment of the allotment for the allotment period.

(f) Transfer of bases and allotments. Allocation bases and allotments shall not be transferrable except as authorized by regulations recommended by the committee and approved by the Secretary and then only in the following circumstances:

(1) In the event of a transfer of the producer's entire production facilities, to the person acquiring and continuing the use of such facilities.

(2) The whole or any part of a producer's base or allotment may not be transferred to any other producer, except where fire, flood, or other similar occurrence prevents the use of the original producer's production facilities for all or part of the allotment period.

Method No. 3

§ **E-52 Desirable free quantity**—The Secretary may establish the desirable free quantity of hatching eggs which all handlers may set at their hatcheries, for their own account or for others, in such period or periods as he may prescribe.

§ **E-53 Percentages**—Whenever the Secretary concludes that the volume of hatching eggs to be set by all handlers, in any period or periods for which the Secretary has established a desirable free quantity of hatching eggs, probably will exceed such desirable free quantity he may establish free and surplus percentages applicable to all hatching eggs received by handlers at hatcheries within such period or periods, which shall total 100% of the hatching eggs. If the Secretary determines that such percentages should be modified within such period or periods, appropriate new percentages may be established and the applicable surplus may be either increased or decreased within any such period.

§ **E-54 Restrictions on handling**—Whenever free and surplus percentages have been established by the Secretary, for a period or periods, each handler operating a hatchery shall withhold from setting for hatching from each lot of hatching eggs received for hatching at such hatchery, a quantity of eggs computed by multiplying the total number of hatching eggs in each such lot by the applicable surplus percentage. All hatching eggs so withheld from setting shall not thereafter be set for hatching by such handler, or any other person, but shall be disposed of in such manner and subject to such safeguards as the committee, with the approval of the Secretary, may prescribe. For purposes of this provision each day's receipts of hatching eggs at the hatchery from any person, or each day's receipts of eggs of the handler's own production, shall be a separate lot.

CERTIFICATION OF ALLOTMENTS

§ **E-55 Certification of allotments**—The committee, with the approval of the Secretary, shall establish by regulation such means of certification with respect to allotments of handlers or producers as may be required to effectuate the purposes of any regulation issued under this part.

RESEARCH AND DEVELOPMENT

§ **E-56 Research and development**—The committee, with the approval of the Secretary may establish or provide for the establishment of marketing research and development projects designed to assist, improve, or promote the marketing, and distribution of hatching eggs. The expenses of such projects shall be paid from funds collected pursuant to section 41.

(EDITOR'S NOTE: Section 41, reviewed in the Nov. 4 issue of Feedstuffs states:

("Each handler shall pay to the committee, upon demand, with respect to hatching eggs handled by him, his pro rata share of all expenses which the Secretary finds are reasonable and likely to be incurred by the committee during each allotment period.

("Each handler's pro rata share shall be the rate of assessment per hundred hatching eggs fixed by the Secretary, but such assessment shall not in any event exceed 25¢ per 100 hatching eggs. At any time during or after the fiscal year the Secretary may increase the rate of assessment to cover unanticipated expenses or a deficit in the anticipated number of eggs handled.

("In order to provide funds to carry out the functions of the board and committee, the committee may accept advance payments from any handler and such shall be credited towards assessments levied pursuant to this section against such handler.

("The payment of expenses for the maintenance and functioning of the board and committee may be required throughout the period during which this part is in effect and irrespective of whether particular provisions thereof are suspended or become inoperative, or whether volume regulation is in effect in the allotment period.")

UNFAIR TRADE PRACTICES

§ **E-57 Authorization for prohibition of unfair trade practices**—Whenever the Secretary finds, upon recommendation of the committee or other information, that continuance of certain unfair practices in trade channels would tend to interfere with the achieving of the objectives of this part, he may prohibit handlers from using such practices, for any period or periods.

Prior to any such practices being prohibited in any period, the committee shall recommend, for the approval of the Secretary, such rules and procedures and such record keeping requirements as are necessary to administer these prohibitions and obtain compliance therewith.

REPORTS AND RECORDS

§ **E-60 Reports**—

(a) Regular monthly reports. On or before the fifth day of each month, each handler shall report on forms prescribed by the committee, his handlings and settings of hatching eggs for the preceding month, providing such information with respect thereto as the committee may prescribe.

(b) Other reports. Upon the request of the committee, with the approval of the Secretary, each handler shall furnish to the committee such other information as may be necessary to enable it to exercise its powers and perform its duties under this part.

§ **E-61 Records**—Each handler shall maintain such records pertaining to all hatching eggs handled as will substantiate the required reports and such others as may be prescribed by the committee. All such records shall be maintained for not less than five years after the termination of the allotment period to which such records relate or for such lesser period as the committee may direct.

§ **E-62 Verification of reports and records**—For the purpose of assuring compliance with record keeping requirements and verifying reports filed by handlers, the Secretary and the committee, through its duly authorized employees, shall have access to any premises where applicable records are maintained, where hatching eggs are handled, and, at any time during reasonable business hours, shall be permitted to inspect such handler premises, and any and all records of such handlers with respect to matters within the purview of this part.

§ **E-63 Confidential information**—All reports and records furnished or submitted by handlers to, or obtained by the employees of the committee which contain data or information constituting a trade secret or disclosing the trade position, financial condition, or business operations of the particular handler from whom received, shall be treated as confidential and the reports and all information obtained from records shall at all times be kept in the custody and under the control of one or more employees of the committee, who shall disclose such information to no person other than the Secretary.

MISCELLANEOUS PROVISIONS

§ **E-70 Rights of the Secretary**—The members of the committee and board (including successors or alternates) and any agent or employee appointed or employed by the committee, shall be subject to removal or suspension by the Secretary, in his discretion, at any time. Each and every decision, determination, or other act of the committee shall be subject to the continuing right of the Secretary to disapprove of the same at any time, and upon such disapproval, shall be deemed null and void.

§ **E-71 Personal liability**—No member or alternate member of the committee or board, nor any employee, representative, or agent of the committee shall be held personally responsible, either individually, or jointly with others, in any way whatsoever, to any person, for errors in judgment, mistakes, or other acts, either of commission or omission, as such member, alternate member, employee, representative, or agent, except for acts of dishonesty.

§ **E-72 Separability**—If any provision of this subpart is declared invalid, or the applicability thereof to any person, circumstance, or thing is held invalid, the validity of the remainder of this subpart or the applicability thereof to any other person, circumstance, or thing shall not be affected thereby.

§ **E-73 Derogation**—Nothing contained in this subpart, is or shall be construed to be, in derogation or in modification of the rights of the Secretary or of the U.S. to exercise any powers granted by the act or otherwise, or in accordance with such powers, to act in the premises whenever such action is deemed advisable.

§ **E-74 Duration of immunities**—The benefits, privileges, and immunities conferred upon any person by virtue of this subpart, shall cease upon the termination of this subpart, except with respect to acts done under and during the existence of this subpart.

§ **E-75 Agents**—The Secretary may, by a designation in writing, name any person, including any officer or employee of the U.S. government, or name any service, division or branch in the U.S. Department of Agriculture, to act as his agent or representative in connection with any of the provisions of this subpart.

§ **E-76 Effective time**—The provisions of this subpart, as well as any amendments to this subpart, shall become effective at such time as the Secretary may declare, and shall continue in force until terminated or suspended in one of the ways specified in section 77.

§ **E-77 Termination or suspension**—

(a) Failure to effectuate policy of act. The Secretary shall terminate or suspend the operation of any or all of the provisions of this subpart, whenever he finds that such provisions obstruct or do not tend to effectuate the declared policy of the act.

(b) Referendum. The Secretary shall terminate the provisions of this subpart on or before the ..... day of ..... of any ..... year whenever he is required to do so by the provisions of section 8c(16)(B) of the act. The Secretary may, at any time he deems it desirable, hold a referendum of producers to determine whether they favor termination of this subpart. If the Secretary receives a recommendation, adopted by the board, requesting the holding of such a referendum he shall hold such referendum. The results of any such referendum shall be announced by the Secretary by ..... of the ..... year in which held.

(c) Termination of act. The provisions of this subpart shall terminate, in any event, upon the termination of the act.

§ **E-78 Procedure upon termination**—Upon the termination of this subpart, the members of the committee then functioning shall continue as joint trustees, for the purpose of liquidating the affairs of the committee. Action by such trustees shall require the concurrence of a majority of said trustees. Such trustees shall continue in such capacity until discharged by the Secretary, and shall account for all receipts and disbursements and deliver all property on hand, together with all books and records of the committee and the joint trustees, to such person as the Secretary may direct; and shall, upon the request of the Secretary, execute such assignments or other instruments necessary or appropriate to vest in such person full title and right to all the funds, properties, and claims vested in the committee or the joint trustees, pursuant to this subpart. Any person to whom funds, property, or claims have been transferred or delivered by the committee or the joint trustees, pursuant to this section, shall be subject to the same obligations imposed upon the members of said committee and upon said joint trustees.

§ **E-79 Effect of termination or amendment**—Unless otherwise expressly provided by the Secretary, the termination of this subpart or of any regulation issued pursuant to this subpart, or the issuance of any amendment to either thereof, shall not (a) affect or waive any right, duty, obligation, or liability which shall have arisen or which may thereafter arise in connection with any provisions of this subpart or any regulation issued under this subpart, or (b) release or extinguish any violation of this subpart or any regulation issued under this subpart, or (c) affect or impair any rights or remedies of the Secretary, or of any other person, with respect to such violation.

§ **E-80 Amendments**—Amendments to this subpart may be proposed, from time to time, by any person or by the committee.

MARKETS

(Continued from page 2)

average price paid per ton of broiler feed was $90.82, up $2 over the previous week. A pound of broiler meat would buy 2.7 lb. of feed compared to 3 lb. the week before.

In spite of week after week losses of a couple of cents or so per pound, there seems to be no weakening of the broiler industry. In fact, the broiler industry men have apparently gotten used to the idea of low prices and seldom complain any more. Only a few have gone out of business.

Good hay is short in supply, and several mills are recognizing the market potential in the estimated 50,000 race and pleasure horse population in the area.

South Central

Formula feed sales continue to maintain the fairly brisk pace of recent weeks. Most manufacturers are operating on a strong five-day basis, and six-day runs are not uncommon. Demand is being helped by the arrival of frost and cooler weather.

While a substantial share of the sales volume consists of cattle rations, hog feed deliveries still account for the major portion of current business. Pig feed total is large, with grower feeds now in the forefront. Only an indifferent demand exists for poultry feeds.

Weather for corn picking is promising, but only a small amount has been harvested compared with a year ago. First hand offerings from the country are very light; however, the Commodity Credit Corp. is keeping the trade reasonably well supplied at present.

Price lists will be higher again this week, reflecting higher ingredient costs.

Ohio Valley

The increase in volume of feed noted during the past two weeks was sustained this week by a steady demand. There is a continued demand for cattle, dairy and hog feeds.

In the retail market, the demand for poultry showed some improvement, probably due to the drop of 1 to 2¢ lb. on broilers. There was a slight increase in demand for dressed turkeys, and prices for eggs remained steady for the fair demand.

Pacific Northwest

Oregon, Washington and Idaho formula feed movement continued at a seasonally slow bell this week. Trade sources at Portland indicated that although colder weather is still increasing the demand for dairy cattle and livestock feeds, the call for turkey and poultry rations is seasonally limited in most areas.

Live chicken prices held unchanged at Portland for the second consecutive week, with most poultry processors quoting No. 1 grade fryers to producers at 15¢ to 19¢ lb., f.o.b. Willamette Valley, Oregon, farms.

Producer paying prices for eggs continue to follow an irregular trend and this week were unchanged to 1¢ a dozen higher at the outside of the general range.

Southern California

Feed production continued to decline slightly for most mills due to the large number of turkeys being slaughtered daily. This trend is expected to continue for the next month causing production lags.

The turkey market improved somewhat with hens selling for 20¢ lb., f.o.b. ranch, and toms trading for 18¢ lb. However, these prices are still below production costs by 2 to 3¢ lb. depending on the operation and the rancher's efficiency. Several feed dealers are optimistic that prices will increase another 2 to 3¢ between now and the holidays.

Poultrymen were relieved when egg prices remained unchanged this week after suffering three consecutive price decreases. The demand for large eggs has improved causing producers to feel some additional market strength will be evident throughout the holidays.

Broilermen were discouraged as their market backed down to 12½ to 13¢ lb., f.o.b. ranch, a price well below replacement costs. The larger producers in the area have curtailed production.

INDEX OF ADVERTISERS

The index of advertisers is provided as a service to readers and advertisers. The publisher does not assume any liability for errors or omissions.

Abbott Laboratories 89
A-C-E Supply & Equip. Co... 20
Agric. Prod. Research Council
Agri-Tech .....
Albumine Supply Co. .....
Allied Mills 37
Amburgo Company 70
American Cyanamid Co. ...38, 39
American Dehydrators Assn...
American Scientific Lab. 41
Anderson Box .....
Anderson, V. D., Co. 46
Arbor Acres Farm 61
Archer-Daniels-Midland Co., Alfalfa Division 5
Aubrey & Co. 34

Baker Equipment Eng. Co. .. 35
Baker, H. J., & Bro., Inc...
Baker, M. H. .....
Baroid Chemicals, Inc., Subsidiary of Nat'l Lead Co...
Baughman Mfg. Co., Inc. ... 22
Baxter, A. E., Engineering Co.
Beardstown Mills
Bemis Bro. Bag Co. 43
Berg, Paul 79
Blatchford Calf Meal Co. ...
Blomfield-Swanson .....
Bonded Scale & Mach. Co. ..
Borden Co. .....
Bowman Feed Prod. 87
Bradley-Barr & Co. .....
Brock Mfg., Inc. .....
Brower Manufacturing Co. .. 69
Brown's Ledbrest, Inc. .....
Bryant Engineering Co. .....
Buhler Corp., The .....
Burlap Council 30
Burrows Equipment Co. 86
Butler Mfg. Co. .....

C-K Processing Co. 34
Calcium Carbonate Co. .....
California Pellet Mill Co. .. 49
Cardinal Scale Mfg. Co. ....
Carey Salt .....
Cargill, Inc. .....
Champion Portable Mill Co... 16
Chase Bag Co. 76
Checkerboard Grain Co. 23
Chick-Master Incubator Co. ..
Chore-Boy Mfg. Co. 48
Ciba Pharmaceutical Co. ....
Citrus Processors .....
Cleveland Vibrator 74
Clinton Corn Processing Co...
Clofine, Herbert K. 71
Clupak, Inc. 67
Cobb's Pedigreed Chicks, Inc. 49
Colonial Poultry .....
Columbia Phosphate Co. 69
Columbia Quarry Co. .....
Columbian Steel Tank .....
Commercial Solvents Corp. .. 9
Consolidated Blenders, Inc...
Consolidated Quarries Div., The Georgia Marble Co. ..
Consolidated Water Power & Paper Co. .....
Constantflo Mach. Co. .....
Continental Grain .....
Continental Sales Co.
Corn Products Sales Co. .....
Credit & Financial Mgrs. Assn.
Custom Millers Supply Co. .. 61

Daffin Manufacturing Div. .. 80
Dannen Mills, Inc. 33
Darling & Co. 22
Davies, Wm., Co., Inc. .....
Davis Enterprises .....
Davis, H. C., Sons' Mfg. Co., Inc. .....
Dawe's Laboratories, Inc. 77
Day, Joseph P., Co. .....
Day Company, The .....
Daycom, Inc. 84
Dayton Bag & Burlap 30
Deere, John, Chemical .....
De Kalb Agr. Assn., Inc. ....
Delaware Poultry Lab. .....
Devold, Peder .....
Diamond Alkali Co. .....
Diamond V Mills, Inc. 67
Distillation Products Industries 40
Distillers Feed Research Council .....
Doane Feed Products .....
Dodgen Industries .....
Dorn & Mitchell Laboratories. 59
Douglas Chemical Co. .....
Dow Chemical Co. 72, 73
Duplex Mill & Mfg. Co. 75

Easland, J. W., & Son Co. ..
Eastman Chemical Prod., Inc. 76
Ehrsam, J. B., & Sons Mfg. Co., The .....
Elanco Products Co. 12, 13, 56, 57, 65
Energy Mfg. Co. .....
Eriez Mfg. .....
Eschenheimer, Rudy, Co. ....
Esheiman, John W. .....
Ewing, Ray, Co. 26

FMC Corp. .....
Ferrat Lab. .....
Fischbein, Dave, Company ...
Flavor Corp. of America ...
Forster Mfg. Co. .....
Fox Co. 30
Frontier Chemical .....
Fruen Milling Co. 27
Fuller Co. .....

General Mill Equipment Co...
Gerber Sheet Metal .....
Gland-O-Lac Co. .....
Grace, W. R., & Co. .....
Grain Belt Supply Co. .....
Grain Processing Corp. .....
Gump, B. F., Co. 34

Hales & Hunter Co. .....
Hand, Peter, Foundation ....
Harris Lab. .....
Harshaw Chem. .....
Haugen, W. D., Co. .....
Hayes & Stolz Ind. Mfg. Co...
Heil Co., The .....
Heisdorf & Nelson Farms, Inc
Henderson Mfg. .....
Henke Mfg. Co. .....
Hess & Clark, Inc. 82, 83
Heterochemical Corp. 15
Hoffmann-La Roche, Inc. ..50, 51
Hoffman-Taff, Inc. 11
Hogenson Const. Co. .....
Hogg, N. D., Ltd. .....
Holt Products .....
Honeggers' & Co. 75
Hooker Chemical 66
Hot Spot Detector .....
Howes, S., Co., Inc. .....
Hubbell, Charles H. 20
Huss & Schlieper .....
Hy-Line Poultry .....

Ibberson, T. E., & Co. .....
Illinois Soy Products .....
International Minerals & Chemical Corp. 53
International Salt Co., Inc...
Iowa Limestone Co. .....

Jacobson Machine Works ... 87
Jersee Co. .....
Johnson, A. E., & Sons, Inc...

Kansas Soya Prod. Co., Inc...
Keen Mfg. .....
Kees & Company 60
Kem Mfg. Co. .....
Kent Feeds .....
Keystone Steel & Wire .....
Kindstrom-Schmoll Co. .....
Koyker Mfg. Co. .....
Kraft Bag Div. 33
Kraft Foods Co. 42

LaBudde Feed & Grain Co. .. 60
Landers Mach. Co. 70
Land O'Lakes Creameries, Inc.
Lauhoff Grain Co. 26
Leach Mfg. Co. 14
Limestone Products Corp. of America 60
Linwood Stone Prod. .....
Loncala Phosphate Co. .....
Long Prairie Alfalfa Mills ..

M-E-C Co. .....
McCabe Grain Co., Ltd. ....
McLeod, Frank .....
McNeally, H. Mark 14
Magnus, Mabee & Reynard..
Maney Bros. Mill & Elev. Co. 4
Marion Feed Center .....
Mayo Shell Corp. 10
Merck & Co., Inc. 21, 25, 32, 68, 85
Meyer, C. W. .....
Mid-Continent Grain Co. 41
Mid-States Construction .....
Midwest Dried Milk Co. ....
Milbrew Co. .....
Miller, Mel, & Co., Inc. ...
Miller Publishing Co., The ...
Minneapolis Sewing Mach. ... 24
Monsanto Chemical 36
Mooers Mfg. Co. 58
Morton Chemical Co. .....
Morton Salt Co. 79
Myers-Sherman Co. .....
Myzon Laboratories .....

Nagel, Herman, Co. .....
National Alfalfa Dehydrating & Mfg. Co. 100
National Distillers Products ...
National Molasses Co. 11
National Renderers .....
National Vitamin Prod. .....
Nationwide Leasing Co. ..24, 74
Nellis Feed Co. .....
New Century Co., The .....
New England By-Prod. Corp...
Nichols, Incorporated 87
Nootbaar, H. V., & Co. ....
Nopco Chemical Co. 28, 29
North American Trading & Import Co. .....
North Carolina Granite .....
Nor-Vell, Inc. .....

Oakes Mfg. .....
Olavarria & Co. .....
Oliver Machine Works .....
Oyster Shell Co. 74
Oyster Shell Prod. Co. 64

Pabst Brewing Co. .....
Pabst Sales .....
Paper, Calmenson & Co. 3
Park, Phillip R., Inc. .....
Parks, J. F., Inc. 95
Parrish & Heimbecker .....
Parrish, N. K. .....
Paxton Processing Co. 91
Pay Way Feed Mills, Inc. ...
Penick, S. B., & Co. .....
Peterson Breeding Farm 54
Pfizer, Chas., & Co., Inc...62, 63
Phelps Dodge .....
Pilch's Poultry 52
Pittsburgh Plate Glass Co. ..
Pless, Joe N., Co. 79
Pockman, L. A., Mfg. Co. 79
Pope Testing Lab. .....
Poultry By-Products Assn. 24
Power Curve Conveyor .....
Prater Pulverizer Co. 91
Productive Acres Mfg. Co. 11
Products Blending Co. 47
Professional Feeds Div. .....
Publicker Industries, Inc. 31

Quaker Oats Co. .....

Ralston Purina Co. 81
Rapids Machinery Co. 54
Red River Alfalfa Co. .....
Reilly Tar & Chem. Corp. ..
Reliance Feed Co. .....
Reynolds & Co. .....
Richardson Scale Co. .....
Riley Feed .....
Ripco, Inc. .....
Roskamp Huller Co. .....
Ross Mach. & Mill Supply ..
Ryde & Co. .....

St. Regis Paper Co. .....
Salsbury's, Dr., Labs. 44, 45
Schenley Distillers, Inc. .....
Schutte Pulverizer Co., Inc...
Scott Paper .....
Seagram, Joseph E., & Sons, Inc. .....
Sedberry, J. B. 19
Seedburo Equipment Co. 14
Sheffield Chemical .....
Shelby Mfg. 20
Shellbuilder Co. 58
Sievert, C. W. .....
Simonon Mfg. Co. .....
Small, The W. J., Co. 5
Smith-Douglass Co., Inc. ..46, 47
Soft Phosphate Co. 14
Sohio Chemical Co. .....
Southwest Mill Supply Co. ..
Spencer Kellogg Division of Textron, Inc. .....
Sprout, Waldron & Co., Inc... 52
Squibb, E. R. .....
Stabilized Vitamins .....
Standard Brands, Inc...36, 64, 80
Sterol Derivatives, Inc. 35
Sterwin Chemicals Inc. 59
Stivers, T. E., Co. 23
Sudenga Industries .....
Sunset Feed & Grain Co. ... 19
Superior Boiler Works .....
Superior Feed Co. .....
Sutorbilt Corp. .....
Swanson, Carroll, Sales Co. ..
Sweet Mfg. 70
Swift & Co. .....

Taste Engineering Co. .....
Thomas Conveyor .....
Thompson-Hayward 71
Tierney-Gerber Roto Vent, Inc.
Toledo Scale 27
Toxite Laboratories .....

Ultra-Life Laboratories, Inc... 55
Union Bag-Camp Paper Corp.
Union Special Machine Co. ..
Universal Hoist Co. .....
Upjohn Co. .....

Val-A Co. .....
Ventress, Chas., Farms, Inc. .. 17
Vineland Laboratories, Inc. ..
Vineland Poultry Lab. .....
Vitren Corp. 42
Vy Lactos Laboratories, Inc...

W-W Grinder Corporation .. 48
Warren Douglas .....
Weians & Co. .....
Wells, Ralph, & Co. .....
Wenger Mixer Mfg. 64
Wertz Feed Products .....
Western Condensing Co. .....
Western Yeast Co. .....
West Fargo Mfg. Co. .....
West Va. Pulp & Paper Co...
White Shell Corp. .....
Whitmoyer Laboratories, Inc.. 23
Wilhoit Laboratory .....
Wilson & Co. .....
Wilson, R. S., Co. 23
Wilson Trailer Co. 88
Wirthmore Feeds .....

Young, John .....

VERDICT

(Continued from page 6)

to pay his feed bill, he should in turn be awarded $15,385.70 in damages.

Attorneys for Albers returned to court to point out the apparent inconsistency of the decision and Aug. 9 entered a motion for a judgment N.O.V.—notwithstanding the verdict.

In reaching his opinion, Judge Stafford said, "Assuming that the defendant sustained a loss in his percentage of egg production, chicken mortality and a rise in feed costs, there was no testimony upon which the jury could establish just what part of the loss, if any, was attributable to feed, what was caused by disease, what was due to improper housekeeping or what part was due to following a different formula for establishing percentages than was used by the U.S. Department of Agriculture and/or Albers.

"There was no testimony to establish with a reasonable probability whether all, a large part or no part of the losses were caused by the feed. To have assessed damages in any particular amount, under these conditions, required conjecture and speculation."

Lindsey-Robinson Creditors to Meet

ROANOKE, VA.—Creditors of Lindsey-Robinson Co. will meet at 10 a.m. Nov. 16 in the bankruptcy courtroom of Roanoke's federal building.

The company filed its answer this week in the involuntary bankruptcy proceedings brought against it by four creditors. Listed were liabilities of $1,400,761.98 and assets of $232,745.44.

The notice of the meeting asks creditors to show cause why any part or all of the assets should not be sold without further notice to creditors.

In its answer the former feed and flour company said it closed its plant in Roanoke Aug. 19, 1960, and formed a creditors committee the following month.

After failure of efforts to lease or sell the property, the answer said, the Bank of Virginia foreclosed on its $960,000 deed of trust. At a public sale in June, the bank bid in the property for $390,000.

The company said that creditors received 20% of their claims last month, leaving a reserve fund of $10,000 for vacation pay to employees and contested claims.

Four creditors filed the petition last month, charging that the company committed an act of bankruptcy by permitting a creditor to secure a judgment in another state.

Texas Mill to Make General Mills Feed

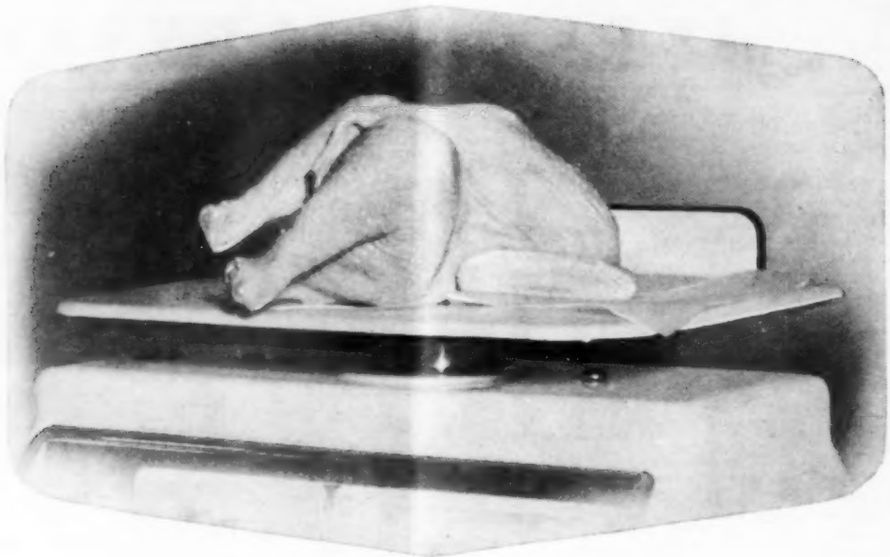
SLATON, TEXAS—Livestock and poultry feed for General Mills, Inc., will be manufactured in Slaton through an arrangement with the Ray C. Ayers & Sons Milling plant.

The Ayers firm, in business since 1928, will continue its grain operations separately; however, its milling equipment will be devoted exclusively to the manufacture of Sure-Feeds for General Mills, officials announced.

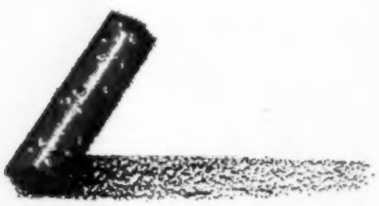
M. J. Cronan will move from the General Mills plant in Ft. Worth to become operations control manager of the Slaton mill.

THEFT FROM FEED STORE

DUBUQUE, IOWA—Nearly $500 in cash and checks was taken in a recent break-in at the Bankston Feed and Supply Co., 15 miles northwest of Dubuque.



the two most under valued products today



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